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United States
Circuit Court of Appeals

Vol
1820

For the Ninth Circuit.

THE MAGNAVOX COMPANY, a Corporation,
Appellant,

vs.

ERNEST INGOLD, INC., a Corporation,
Appellee.

THE MAGNAVOX COMPANY, a corporation,
Appellant,

STROMBERG CARLSON TELEPHONE MAN-
UFACTURING COMPANY, a Corporation,
and GARNETT YOUNG & CO., a Corpora-
tion,

Appellee.

Transcript of Record

Upon Appeals from the District Court of the United
States for the Northern District of California,
Southern Division.

FILED
OCT 10 1933
PAUL P. O'BRIEN,
CLERK

United States
Circuit Court of Appeals

For the Ninth Circuit.

THE MAGNAVOX COMPANY, a Corporation,
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[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in italic; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in italic the two words between which the omission seems to occur.]

No. 2615-S

The Magnavox Company,
Appellant & Plaintiff
vs.

Ernest Ingold, Inc.,
Appellee & Defendant

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vs.

Stromberg Carlson Tel. Mfg. Co.,
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United States District Court, Northern District of
California, Southern Division.

In Equity
Number 2615 S

THE MAGNAVOX COMPANY, a corporation,
Plaintiff,

vs.

ATWATER KENT MANUFACTURING COM-
PANY, a corporation; and ERNEST INGOLD,
INC., a corporation,

Defendants.

Patent Infringement:

Patent 1,266,988, Patent 1,448,279, Patent 1,579,392.

BILL OF COMPLAINT.

Comes now THE MAGNAVOX COMPANY, plain-
tiff above named, and complains of ATWATER

KENT MANUFACTURING COMPANY, a corporation, and ERNEST INGOLD, INC., a corporation, above-named defendants, and for cause of action alleges:

I.

That the plaintiff, THE MAGNAVOX COMPANY, during all the times hereinafter mentioned was and is a corporation duly organized and existing under and by virtue of the laws of the State of Arizona, with a place of business in the City of Oakland, County of Alameda, State of California.

II.

That the defendant ATWATER KENT MANUFACTURING COMPANY is a corporation organized under the laws of the State of Pennsylvania, with a regular and established place of business in the City and County of San Francisco, State of California; that the defendant ERNEST INGOLD, INC., is a California corporation with a place of business in the City and County of San Francisco, State of California. [1*]

*Page numbering appearing at the foot of page of original certified Transcript of Record.

III.

That the jurisdiction of the Court depends upon the Patent Laws of the United States.

IV.

That prior to the 3rd day of July, 1916, Edwin S. Pridham and Peter L. Jensen were the true, original, first and joint inventors of certain new and useful

improvements in Amplifying Receivers, not known or used by others in this country before their invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before their invention or discovery thereof, or more than two years prior to their hereinafter-recited application for Letters Patent therefor, and not in public use or on sale in this country for more than two years prior to their said application, and for which no application for Letters Patent in any country foreign to the United States of America had been filed more than twelve months prior to the filing of the application in this country, and which had not been abandoned; and that being entitled to a patent for said improvements, under the provisions of the Statutes of the United States then in force, said Edwin S. Pridham and Peter L. Jensen did, on the 3rd day of the July, 1916, file in the Patent Office of the United States a joint application for Letters Patent on said invention; that said application was duly assigned to Commercial Wireless & Development Company, a corporation organized under the laws of the State of Arizona, before the issuance of said Letters Patent, by assignment duly recorded in the Patent Office of the United States. That thereafter, to-wit, on May 21, 1918, all requirements of the statutes then in force having been complied with, Letters Patent of the United States for said invention, signed, sealed, and executed in due form of law, were duly issued to the said [2] Commercial Wireless & Development

Company as assignee of the entire right, title and interest therein and thereto; that the Letters Patent so issued were numbered 1,266,988, and said Letters Patent or a duly certified copy thereof are ready to be produced as this Court shall direct.

V.

That the Plaintiff, The Magnavox Company, by written assignment is now the sole and exclusive owner of the entire right, title, and interest in and to the aforesaid Letters Patent 1,266,988, including all rights to recover for past infringement thereof.

VI.

That prior to the 28th day of April, 1920, Edwin S. Pridham and Peter L. Jensen were the true, original, first and joint inventors of certain new and useful improvements in Electrodynamic Receivers, not known or used by others in this country before their invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before their invention or discovery thereof, or more than two years prior to their hereinafter-recited application for Letters Patent therefor, and not in public use or on sale in this country for more than two years prior to their said application, and for which no application for Letters Patent in any country foreign to the United States of America had been filed more than twelve months prior to the filing of the application in this country, and which had not been abandoned; and that being entitled to a patent for said improvements,

under the provisions of the Statutes of the United States then in force, said Edwin S. Pridham and Peter L. Jensen did, on the 28th day of April, 1920, file in the Patent Office of the United States a joint application for Letters Patent on said invention; that said application was [3] duly assigned to Plaintiff, The Magnavox Company, before the issuance of said Letters Patent, by an assignment duly recorded in the Patent Office; that thereafter, to-wit, on the 13th day of March, 1923, all requirements of the statutes then in force having been complied with, Letters Patent of the United States for said invention, signed, sealed, and executed in due form of law, were duly issued to the said The Magnavox Company, as assignee of the entire right, title and interest therein and thereto; that the Letters Patent so issued were numbered 1,448,279, and said Letters Patent or a duly certified copy thereof, are ready to be produced as this Court shall direct.

VII.

That prior to the 20th day of March, 1922, Edwin S. Pridham and Peter L. Jensen were the true, original, first and joint inventors of certain new and useful improvements in Electrodynamic Receivers, not known or used by others in this country before their invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before their invention or discovery thereof, or more than two years prior to their hereinafter-recited application for Letters Patent therefor, and not in public use or on sale in

this country for more than two years prior to their said application, and for which no application for Letters Patent in any country foreign to the United States of America had been filed more than twelve months prior to the filing of the application in this country, and which had not been abandoned; and that being entitled to a patent for said improvements, under the provisions of the Statutes of the United States then in force, said Edwin S. Pridham and Peter L. Jensen did, on the 20th day of March, 1922, file in the Patent Office of the United States a joint application for Letters Patent on said invention; that said application was [4] duly assigned to Plaintiff, The Magnavox Company, before the issuance of said Letters Patent by an assignment duly recorded in the Patent Office; that thereafter, to-wit on the 6th day of April, 1926, all requirements of the statutes then in force having been complied with, Letters Patent of the United States for said invention, signed, sealed and executed in due form of law, were duly issued to the said The Magnavox Company, as assignee of the entire right, title and interest therein and thereto; that the Letters Patent so issued were numbered 1,579,392, and said Letters Patent or a duly certified copy thereof, are ready to be produced as this Court shall direct.

VIII.

That Plaintiff is still the owner of all right, title, and interest in and to the aforesaid inventions, and in and to the aforesaid Letters Patents.

IX.

That the inventions of the several Letters Patents aforesaid are capable of conjoint use, and have been so used by Defendants herein.

X.

That the said inventions patented as aforesaid are of great value and utility to Plaintiff, and to the public generally; that the Plaintiff and its licensees, since the dates of said inventions, have caused to be manufactured and sold great numbers of said devices embodying the inventions of said Letters Patent and each of them; that Plaintiff has expended large sums of money in causing the said inventions to be developed, and has built up a large and profitable business for the exploitation of said devices, so that the said inventions and patent rights have been and are of great utility and great value to the Plaintiff and its licensees, and, but for the unlawful acts of the Defendants herein complained of, would have been of greater value and profit to them. [5]

XI.

That the devices caused to be manufactured and sold by Plaintiff and its licensees, embodying the inventions of the aforesaid Letters Patent, and each of them, have been and are duly marked "Patented," with the date and/or number of each of said Letters Patents, all in the manner prescribed by the Statutes of the United States; and Plaintiff's ownership of said inventions and Letters Patents has been widely

recognized and acquiesced in by the public and by the trade generally.

XII.

Plaintiff further shows that on the 16th day of August, 1928, it filed a suit in equity in the District Court of the United States for the Northern District of California, Southern Division, against Frederick H. Thompson Company, defendant, for the infringement of the said Letters Patents here in suit, being suit in Equity No. 2166-S; that the pleadings in the said cause were in the usual form; that the said Letters Patents were assailed for want of invention and novelty and that the said Edwin S. Pridham and Peter L. Jensen were not the original and first inventors and discoverers of the subject matter of the said Letters Patents or of any material or substantial part thereof, and that the same or material or substantial parts thereof had been in public use and on sale in this country prior to said invention and for more than two years prior to the respective applications for said Letters Patents, and that the same had been described and illustrated in printed publications prior to the dates of said inventions of said Edwin S. Pridham and Peter L. Jensen; that after a trial before said Court and the examination of witnesses and the introduction of documentary evidence by the respective parties and the evidence being closed and [6] argued by the respective parties the cause was submitted to the Court; and after due consideration said Court on the 9th day of April, 1930, sustained said patents and each of them and

adjudged the same to be valid in all respects, holding that said patents and each of them represented a new, useful, and patentable invention, and that the same was infringed.

XIII.

That, well knowing the premises, and with intent to injure and defraud the plaintiff, the defendants have jointly and severally and since the grant of said Letters Patents and each of them, and within six years prior to the filing of this Bill of Complaint, and within the Northern District of California, and elsewhere within the United States, infringed upon said Letters Patents and each of them, by making and/or selling and/or using devices embodying the inventions of each of said Letters Patents, which said devices infringed and infringe upon said Letters Patents and each of them and each and all of the claims thereof, by making and/or selling devices embodying the inventions of each of said Letters Patents and of the several claims thereof, all without the license or consent of plaintiff and in defiance of plaintiff's rights, and threaten to continue to so infringe, all to the great and irreparable damage of the plaintiff and to the unlawful gain and profit of the defendants.

WHEREFORE, plaintiff prays a decree of this Court against the defendants and each of them, as follows:

First. That upon the filing of this Bill of Complaint a preliminary injunction be granted, enjoin-

ing and restraining the defendants, and each of them, their respective agents, servants, attorneys, and employees, pendente lite, from making, using or selling any apparatus which infringes upon said Letters Patents, in violation of plaintiff's rights aforesaid.

[7]

Second. That upon the final hearing defendants, and each of them, their respective servants, agents, attorneys, and employees, be permanently and finally enjoined and restrained from making, using or selling any device, machine or apparatus which infringes upon said Letters Patents Numbers 1,266,988, 1,448,279, and 1,579,392, in violation of plaintiff's rights as aforesaid, and that a writ of injunction be issued out of and under the seal of this Court enjoining the said defendants and each of them, their respective agents, servants, attorneys and employees, as aforesaid.

Third. That plaintiff have and recover from the defendants the profits realized by the defendants, respectively, and the damages sustained by the plaintiff from and by reason of the infringement aforesaid, together with costs of suit, and that the said damages be trebled by reason of the willful nature of the infringement by defendants herein, and that plaintiff have such other and further relief as to the Court may seem proper and in accordance with equity and good conscience.

CHAS. E. TOWNSEND

WM. A. LOFTUS

THOS. G. GOULDEN

Attorneys for Plaintiff. [8]

State of California,
City and County of San Francisco.—ss.

On this 15th day of April, 1930, before me personally appeared EDWIN S. PRIDHAM, who, being by me duly sworn, deposes and says that he is Vice-President of THE MAGNAVOX COMPANY, the Plaintiff herein; that he has read the foregoing Bill of Complaint, and that the statements therein contained are true, of his own knowledge, except so far as they are alleged to be stated on information and belief, as to which statements deponent believes them to be true.

EDWIN S. PRIDHAM

Sworn to and subscribed before me this 15th day of April, 1930.

[Notarial Seal]

W. W. HEALEY

Notary Public, in and for the City and County of
San Francisco, State of California.

My Commission expires August 29, 1933.

[Endorsed]: Filed Apr 16 1930. [9]

[Title of Court.]

AT A STATED TERM of the Southern Division of the United States District Court for the Northern District of California, held at the Court Room thereof, in the City and County of San Francisco, on Monday, the 19th day of May, in the year of our Lord one thousand nine hundred and thirty.

PRESENT: the Honorable Frank H. Norcross sitting for St. Sure, J:

No. 2615

[Title of Cause.]

By consent, it is Ordered that the motion to quash Service be and the same is hereby granted. [10]

[Title of Court and Cause No. 2615-S.]

ANSWER OF ERNEST INGOLD, INC.,
TO THE BILL OF COMPLAINT.

Now comes Ernest Ingold, Inc., defendant in the above entitled suit, and for answer to the plaintiff's bill of complaint says:

1.

Answering the allegations of paragraph I of said bill, this defendant says that he is without knowledge of the said allegations or any of them.

2.

Answering the allegations of paragraph II of said bill, this defendant admits that the Atwater

Kent Manufacturing Company was and is a corporation organized under the laws of the State of Pennsylvania, but denies that it has or ever had a regular and established or other place of business in the City and County of San Francisco, or elsewhere in the State of California; and on this behalf defendant avers that by an order heretofore made and entered by this Court the suit was dismissed as to said Atwater Kent Manufacturing Company, and that company is no longer a party defendant in [11] the case; admits that the defendant Ernest Ingold, Inc., was and is a corporation with a place of business in the City and County of San Francisco, State of California.

3.

Answering the allegations of paragraph III of said bill, this defendant admits the same.

4.

Answering the allegations of paragraph IV of said bill, this defendant denies on information and belief that prior to the 3rd day of July, 1916, or at any other time, Edwin S. Pridham and Peter L. Jensen were the true or original or first or joint or any inventors of the alleged new and useful improvements in Amplifying Receivers referred to in said paragraph IV of said bill, not known or used by others in this country before their alleged invention or discovery thereof or patented or described in any printed publication in this or any foreign country before their alleged invention or discovery thereof, or more than two years prior

to their application for Letters Patent therefor referred to in said paragraph IV of said bill, or in public use or on sale in this country for more than two years prior to their said application, or that no application for Letters Patent in any country foreign to the United States of America had been filed more than twelve months prior to the filing of the application in this country, or that the same had not been abandoned, or that the said Edwin S. Pridham and Peter L. Jensen were entitled to a patent for said alleged improvements under the provisions of the Statutes of the United States then in force, or that said Edwin S. Pridham and Peter L. Jensen did, on the 3rd day of July, 1916, or any other time, file in the Patent Office of the United States, a joint or other application for Letters Patent on said invention, or that the said applica- [12] tion was duly or otherwise assigned to Commercial Wireless & Development Company, a corporation organized under the laws of the State of Arizona, before the issuance of said Letters Patent, by an assignment duly or otherwise recorded in the Patent Office of the United States, or that thereafter, to-wit, on May 21, 1918, all or any requirements of the statutes then in force were complied with, or that Letters Patent of the United States for said invention, signed, sealed, or executed in due or other form of law, were duly or otherwise issued to the said Commercial Wireless & Development Company as assignee of the entire right, title and interest therein and thereto, or that the said Letters Patent

so alleged to have been issued were numbered 1,266,988, and as to whether or not said alleged Letters Patent or a duly certified copy thereof are ready to be produced as this Court shall direct, this defendant is without knowledge.

5.

Answering the allegations of paragraph V of said bill, this defendant says that he is without knowledge.

6.

Answering the allegations of paragraph VI of said bill, this defendant denies on information and belief that prior to the 28th day of April, 1920, Edwin S. Pridham and Peter L. Jensen were the true or original or first or joint inventors of the alleged new and useful improvements in Electrodynamic Receivers referred to in said paragraph VI of said bill, not known or used by others in this country before their alleged invention or discovery thereof, or not patented or described in any printed publication in this or any foreign country before their alleged invention or discovery thereof, or more than two years prior to their application for Letters Patent therefor referred to in said [13] paragraph VI of said bill, or not in public use or on sale in this country for more than two years prior to their said alleged application, or that no application for Letters Patent in any country foreign to the United States of America had been filed more than twelve months prior to the filing of the alleged application in this country, or that

same had not been abandoned, or that the said Edwin S. Pridham and Peter L. Jensen were entitled to a patent for said improvements under the provisions of the Statutes of the United States then in force, or that on the 28th day of April, 1920, or at any other time, they filed in the Patent Office of the United States a joint application for Letters Patent on said invention, or that said application was duly or otherwise assigned to plaintiff, The Magnavox Company, before the issuance of said alleged Letters Patent, by an assignment duly or otherwise recorded in the Patent Office, or that thereafter, to-wit, on the 13th day of March, 1923, all or any requirements of the statutes then in force had been complied with, or that Letters Patent of the United States for said invention, signed, sealed, or executed in due or other form of law, were duly or otherwise issued to the said The Magnavox Company, as assignee of the entire right, title and interest therein and thereto, or that said alleged Letters Patent, so alleged to have been issued as aforesaid, were numbered 1,448,279; and as to the allegation that said Letters Patent or a duly certified copy thereof, are ready to be produced as this Court shall direct, this defendant is without knowledge.

7.

Answering the allegations of paragraph VII of said bill, this defendant denies on information and belief that prior to the 20th day of March, 1922, or any other day, Edwin S. Pridham and Peter L. Jensen were the true or original or [14] first or

joint inventors of the alleged new and useful improvements in Electrodynamic Receivers, not known or used by others in this country before their alleged invention or discovery thereof, or not patented or described in any printed publication in this or any foreign country before their alleged invention or discovery thereof, or more than two years prior to their application for Letters Patent referred to in said paragraph VII of said bill, or not in public use or on sale in this country for more than two years prior to their said application, or that no application for Letters Patent in any country foreign to the United States of America had been filed more than twelve months prior to the filing of the alleged application in this country, or that the same had not been abandoned, or that the said Edwin S. Pridham and Peter L. Jensen were entitled to a patent for said alleged improvements under the provisions of the Statutes of the United States then in force, or that they did on the 20th day of March, 1922, or any other day, file in the Patent Office of the United States a joint or other application for Letters Patent on said alleged invention, or that said application was duly assigned to plaintiff The Magnavox Company before the issuance of said Letters Patent, by an assignment duly or otherwise recorded in the Patent Office, or that thereafter, to-wit, on the 6th day of April, 1926, or any other day, all or any requirements of the statutes then in force had been complied with, or that Letters Patent of the United

States for said invention, signed, sealed, or executed in due or any form of law, were duly or otherwise issued to the said The Magnavox Company as assignee of the entire right, title and interest therein and thereto, or that said Letters Patent so alleged to have been issued were numbered 1,579,392; and as to the allegation that said Letters Patent or a duly certified copy thereof are ready to be produced [15] as this Court shall direct, this defendant is without knowledge.

8.

Answering the allegations of paragraph VIII of said bill, this defendant is without knowledge.

9.

Answering the allegations of paragraph IX of said bill, this defendant denies on information and belief that the alleged inventions of the several Letters Patent aforesaid are capable of conjoint use, and denies that they have been so used by this defendant.

10.

Answering the allegations of paragraph X of said bill, this defendant denies on information and belief that the said inventions, alleged to be patented as aforesaid, are of great or any value or utility to the plaintiff or to the public generally, or that the plaintiff and its licensees or either of them, since the dates of said alleged inventions, have caused to be manufactured or sold great or any numbers of said devices embodied in the al-

leged inventions, or any of them, of said Letters Patent or of each or any of them, or that the plaintiff has expended large sums of money in causing the said alleged inventions to be developed, or has built up a large or profitable or any business for the exploitation of said devices, or that the said alleged inventions and patent rights have been or are of great or any utility or great or any value to the plaintiff or its licensees or any of them, or that but for the alleged unlawful acts of the defendants, complained of in the said bill, would have been of greater value or profit to the plaintiff or its licensees.

11.

Answering the allegation of paragraph XI of said bill, this defendant is without knowledge. [16]

12.

Answering the allegations of paragraph XII of said bill, this defendant is without knowledge.

13.

Answering the allegations of paragraph XIII of said bill, this defendant denies that it, well or otherwise knowing the premises referred to in said paragraph XIII of said bill, or with intent to injure or defraud the plaintiff or otherwise or at all, either jointly with others or severally by itself, since the granting of said alleged Letters Patent or either of them, or within six years prior to the filing of the said bill of complaint, or any other time, or within the Northern District of California or elsewhere in the United States, or anywhere,

has infringed upon said Letters Patent or either or any of them, by making or selling or using devices or any device embodying the alleged inventions of each or either or any of said Letters Patent which infringed or infringes upon said Letters Patent or each or either or any of them or any of the claims thereof, or by making or selling devices embodying the alleged inventions or any of them of each or either or any of said Letters Patent or of the several or any claims thereof, without the license or consent of plaintiff, or in defiance of plaintiff's alleged rights, or threatens to continue to so infringe, or that any such act or acts will be to the great or irreparable or any damage of the plaintiff or to the unlawful or any gain or profit of this defendant. And in this behalf this defendant denies that it has ever at any time or place made, used, or sold any device or devices containing or embodying the alleged inventions or any of them of said Letters Patent or either or any of them, or that it has infringed upon said Letters Patent or either or any of them or upon the claims or either or any of them of the said Letters Patent or either or any of them [17]

14.

And for a further and separate defense, this defendant pleads, and hereby gives notice that he will prove at the trial, that Edwin S. Pridham and Peter L. Jensen were not the original or first or joint inventors or discoverers of the alleged inven-

tions or any of them or any material or substantial part thereof sought to be patented in and by the several Letters Patent in suit, or either or any of them, but that prior to the alleged invention thereof by said Edwin S. Pridham and Peter L. Jensen, the things sought to be patented in and by the said Letters Patent, and each of them, had been described in certain printed publications and had been patented in and by certain Letters Patent of the United States and foreign countries to the following named persons on the following named dates and bearing the following numbers:

LETTERS PATENT OF THE UNITED
STATES

Name of Patentee	Date of Issuance	Number of Patent
Edison	April 30, 1878	203,015
Edison	Nov. 25, 1879	221,957
Milliken	Aug. 15, 1882	262,811
Richards	June 12, 1894	521,220
Shreeve	April 12, 1898	602,174
Rose	Dec. 14, 1886	354,241
Burns	April 25, 1899	623,702
Dean	April 3, 1906	817,140
Kaisling	Nov. 10, 1908	903,197
Vreeland	Aug. 10, 1909	930,508
Vreeland	Oct. 12, 1909	936,684
Vreeland	Sept. 11, 1917	1,239,852
Rogers	April 22, 1884	297,168
Pridham	Jan. 21, 1913	1,051,113

LETTERS PATENT OF THE UNITED
STATES (Continued)

Name of Patentee	Date of Issuance	Number of Patent
Field	June 11, 1895	540,969
Bain	Dec. 12, 1882	268,980
Siemens	April 14, 1874	149,797
Cuttriss et al	June 14, 1881	242,816
Lindsey	Oct. 27, 1908	901,974
Pearson	Nov. 10, 1908	903,745
Pollak	Nov. 9, 1909	939,625
Oliver	Mar. 8, 1910	951,695
Johnson	Oct. 14, 1913	1,075,786
Blanchard et al	July 21, 1914	1,104,610
Evershed et al	Mar. 9, 1920	1,333,298
King	Apr. 26, 1921	1,375,707
Cuttriss	Apr. 18, 1882	256,795
Jensen et al	Feb. 24, 1914	1,088,283
Weston	Jan. 13, 1891	444,805
Weston	Aug. 16, 1892	480,889
Willis	Apr. 25, 1916	1,180,462

LETTERS PATENT OF FOREIGN
COUNTRIES

Name of Patentee	Country Where Issued	Number of Date
Edison	British	2,909 of 1877
Siemens	British	4,685 of 1877
Lodge	British	9,712 of 1898
Pollak	Norwegian	19,549 of 1909

Name of Patentee	Country Where Issued	Number of Date
Pollak	British	19,282 of 1907
Johnsen	British	12,141 of 1911
Gesellschaft	British	147,946 of 1921
King	British	131,041 of 1919

[19]

LETTERS PATENT OF FOREIGN
COUNTRIES (Continued)

Name of Patentee	Country Where Issued	Number of Date
Johnson	Danish	15,700 of 1912
Brown	British	29,833 of 1910
Johnson	Norwegian	22,331 of 1912
Oliver	French	404,286 of 1909
Oliver	British	12,857 of 1909
Evershed	British	16,895 of 1909
D'Arsonval	French	148,598 of 1882
Pollak	French	393,241 of 1908

PRIOR PRINTED PUBLICATIONS

- “Nature” Vol. 17, Jan. 10, 1878, Page 201,
Published by MacMillan & Co.
- “Popular Science Monthly” Dec. 1978, Page 136,
- “Electrical Engineer” London, January 20, 1899,
Vol. 23, Pages 74-79.
- “Engineering” London, Vol. 67, January 27, 1899,
Pages 124-6.
- “Electrical Engineer” New York, Pages 246-248,
Vol. 37, March 2, 1899.

PRIOR USE

And for a further defense this defendant alleges that Edwin S. Pridham and Peter L. Jensen were not the original or first inventors of the thing sought to be patented in and by the several Letters Patent or either of them herein sued on, or of any material or substantial part thereof, but that long prior to the supposed invention thereof by Edwin S. Pridham and Peter L. Jensen the same was known to and used by Wilton L. Richards, at Malden and Boston, Massachusetts, and his present address is Brooklyn, New York; and by Frederick H. Vreeland, at Montclair, New Jersey, and New York [20] City, N. Y., and his present address is Brooklyn, New York, and also by the persons named as inventors in the patents hereinabove listed, such persons now residing, to the best of defendant's knowledge and belief, at the places specified in said patents and the prior use having been carried on at said places.

15.

And for a further and separate defense this defendant alleges that in view of the state of the art existing at the time of the alleged inventions sought to be patented in and by the patents in suit, no exercise of invention was required to produce the same, but on the contrary the same did not involve patentable invention but only the skill of those experienced in the art.

16.

For a further and separate defense this defendant alleges upon information and belief that by reason of the proceedings in the Patent Office during the prosecution of the applications which resulted in the patents in suit, and by the acts, admissions, statements and representations made by or on behalf of the applicants, each of the claims of said patents sued on is invalid and the plaintiff can not lawfully claim for any of said claims such construction or interpretation as would cover or conclude any apparatus employed by the defendants.

17.

And for a further and separate defense this defendant avers upon information and belief that the subject matter of each of the claims of the patents in suit was abandoned to the public because of unreasonable delay in making and asserting the same and because said claims were not presented until more than two years after the subject matter thereof had been [21] in public use in the United States or described in patents and printed publications and that the plaintiff is estopped to assert that the subject matter of any of said claims may be lawfully claimed and covered by the patents in suit.

18.

And for a further and separate defense this defendant alleges that more than a year prior to the institution of the case at bar and the filing of the

bill of complaint herein, the plaintiff herein, The Magnavox Company, instituted and filed in the District Court of the United States for the Eastern District of Pennsylvania at Philadelphia in the State of Pennsylvania, a suit in equity against the Atwater Kent Manufacturing Company, a corporation created and existing under the laws of Pennsylvania; that said suit was based on the same patents on which the suit at bar is based, to-wit: No. 1,266,988, issued on May 21, 1918, to Edwin S. Pridham and Peter L. Jensen, assignors to Commercial Wireless & Development Company, No. 1,448,279, issued on March 13, 1923 to Edwin S. Pridham and Peter L. Jensen, assignors to The Magnavox Company, and No. 1,579,392, issued on April 6, 1926, to Edwin S. Pridham and Peter L. Jensen, assignors to The Magnavox Company; that in and by the bill of complaint in said Philadelphia suit The Magnavox Company alleged that the Atwater Kent Manufacturing Company had infringed said three patents by manufacturing and selling devices which contained and embodied the inventions patented in and by said three patents, particularly claims 8 and 9 of Letters Patent No. 1,266,988 and claims 4, 8, 9 and 10 of Letters Patent No. 1,448,279, and claim 4 of Letters Patent No. 1,579,392; that in and by said bill of complaint The Magnavox Company prayed for injunctions, both preliminary and final enjoining and restraining the Atwater Kent Manufacturing Company from [22] further making and selling the alleged infringing devices and also

praying for an accounting of damages and profits for the devices made and sold by Atwater Kent Manufacturing Company in the usual form together with costs; that an answer has been filed in said suit *be* Atwater Kent Manufacturing Company and the case is now pending and undetermined though ready for trial at any convenient time;

That the pleadings and issues in said Philadelphia suit are the same as those in the case at bar;

That all the devices sold by defendant in the case at bar and charged to be infringements of the patents sued on were manufactured by the Atwater Kent Manufacturing Company at Philadelphia and sold by it to this defendant, and are a portion of the identical devices charged and claimed in the Philadelphia suit to be infringements of the patents in the suit at bar and in respect of which an injunctions and accounting is prayed for in both said Philadelphia suit and the suit at bar.

And defendant alleges on information and belief that if The Magnavox Company obtains a decree for damages and profits in the Philadelphia case and collects the same the defendant herein will be exempt and freed from the liability to pay damages and profits to the plaintiff herein, and the decree in the Philadelphia case and the collection of damages and profits therein will estop plaintiff from collecting any damages and profits from defendant herein; that the Atwater Kent Manufacturing Company is amply able to pay any and all

damages and profits that may be awarded against it in the said Philadelphia suit.

WHEREFORE, defendant prays judgment that it be hence dismissed with its costs and have such other and [23] further relief as may be just and equitable.

ERNEST INGOLD, INC.

[Seal]

By Ernest Ingold

Pres.

Attest

MELVIN D. LYON

Secretary.

JOHN H. MILLER

A. W. BOYKEN

723 Crocker Building

San Francisco, Cal.

Attorneys and counsel for Defendant.

Receipt of a copy of the within Answer of Ernest Ingold, Inc., to the Bill of Complaint admitted this 24th day of June, 1930.

CHAS. E. TOWNSEND

WM. A. LOFTUS

for Plaintiff.

[Endorsed]: Filed Jun 24 1930 [24]

[Title of Court and Cause No. 2615-S.]

AMENDMENTS TO ANSWER

Now comes the defendant and by leave of Court first had and obtained files the following amendments to its Answer heretofore filed:

AMENDMENT No. 1

On Page 9, after line 19, add to the list of patents therein specified the following:

Name of Patentee	Date of Issuance	Number of Patent
Cheever	Jan. 22, 1884	292,203
Tommasina	May 13, 1902	700,161

AMENDMENT No. 2

On page 10, after line 20, add the following:

PRIOR KNOWLEDGE

And for a further and separate defense, this defendant alleges on information and belief that Edwin S. Pridham and Peter L. Jensen were not the original and first inventors or discoverers of the thing sought to be patented by the several letters patent or either of them herein sued [25] on, or any material or substantial part thereof, but that before the alleged invention thereof by said Edwin S. Pridham and Peter L. Jensen the same was known to the following named persons, viz:

Each of the patentees named in the list of patents pleaded in the Answer on pages 8, 9 and 10.

Radio Corporation of America,
residing at New York City.

Oliver Joseph Lodge,
residing at Liverpool, England.

Reginald A. Fessenden,
residing at Chestnut Hill, Mass.

Fritz P. Mansbendel,
residing at New York City.

Jesse B. Murphy,
residing at Wilkinsburg, Pennsylvania.

Clair L. Farrand,
residing at Stamford, Connecticut.

William H. Davis,
residing at New York City.

Edmond L. Ragonot,
residing at Paris, France.

Edward W. Kellogg,
residing at Schenectady, New York.

WHEREFORE, defendant renews the prayer of its original answer.

JOHN H. MILLER

A. W. BOYKEN

Attorneys for Defendant.

CONSENT TO FILING ABOVE
AMENDMENT TO ANSWER

Plaintiff hereby consents to the filing of the above amendments to the answer of defendant without the necessity of a formal motion by defendant therefor.

CHAS. E. TOWNSEND

WM. A. LOFTUS

Attorneys for Plaintiff.

San Francisco, California,

February 11, 1932.

[Endorsed]: Filed Feb. 13, 1932. [26]

[Title of Court and Cause No. 2615-S.]

SECOND AMENDMENT TO ANSWER OF
DEFENDANT.

Now comes defendant and by leave of Court files the following amendment to its answer, viz:

1. On page 10 line 19 of said answer change "Vol. 37" to Vol. 27.

2. On page 10 of said answer after line 19 add the following additional printed publication, viz:

The Electrician, pages 269-71, published at London, England, on December 16, 1898; also pages 307-9 of said publication, published December 23, 1898; also pages 366-7 of said publication, published January 6, 1899; also pages 402-5 of said publication, published January 13, 1899.

WHEREFORE, defendant renews the prayer of its answer.

JOHN H. MILLER

A. W. BOYKEN

N. D. THOMAS

March 8, 1932.

Attorneys for Defendant.

Service of the within SECOND AMENDMENT TO ANSWER OF DEFENDANT admitted this 8th day of March, A. D. 1932, and consent to filing thereof is hereby given.

CHAS. E. TOWNSEND

WM. A. LOFTUS

Attys for Plaintiff.

[Endorsed]: Filed Mar 14 1932. [27]

[Title of Court and Cause No. 2615-S.]

ORDER FOR DEDIMUS POTESTATEM

Plaintiff having moved the Court for a dedimus potestatem to issue to take the testimony of one EDWARD E. ROBINSON, of Egham, Surrey, England, and one OLIVER LODGE, Royal Society, London, England, and possibly others, material witnesses for plaintiff and whose testimony is necessary to prevent a failure or delay of justice, and both parties being represented by counsel.

Now, for good cause shown, it is ORDERED that a dedimus potestatem be issued in this cause out of this Court, directed to the United States Consul or to such Deputy or representative of such Consul as may be authorized by him to act in his place and stead, at London, England, to examine the following named persons, under oath, as witnesses herein, to-wit:

EDWARD E. ROBINSON, of Egham, Surrey, England;

OLIVER LODGE, Royal Society, London, England, and possibly others.

It is further ORDERED that the examinations above provided for shall take place some time between November 16, 1931 and November 28, 1931.

It is further ORDERED that all directions herein contained as to time, place and order and manner of examination [28] of said witnesses may be changed or modified with the written consent of the counsel for the respective parties in London, England.

It is further ORDERED that prior to the 30th day of October, 1931, the attorneys for the plaintiff shall

give notice in writing of the names and European address or addresses of the witnesses to be examined and the date, hour and place where the taking of said depositions shall begin.

It is further ORDERED that prior to the 5th day of November, 1931, the attorneys for the respective parties shall give notice, each to the other, of the names and European address of the counsel for the respective parties who are to take or attend the taking of testimony under this commission.

It is further ORDERED that the examination of all witnesses under this commission shall be oral, or taken by question and answer in the usual manner of taking oral depositions by examination, cross-examination and redirect examination; and that the testimony given under such examination may be taken down in shorthand and shall be reduced to writing, signed by the witnesses and certified by the Commissioner and by him transmitted by mail to the Clerk of this Court at the City and County of San Francisco, State of California, unless otherwise mutually agreed upon by counsel for both parties.

It is further ORDERED that all testimony taken under the commission provided for herein shall be taken subject to all legal objections as to competency, relevancy and/or materiality at the trial of this cause.

A. F. ST. SURE

Judge of the United States District Court for the
Northern District of California, third Division.

Dated: October 27, 1931.

[Endorsed]: Filed Oct 27 1931. [29]

[Title of Court and Cause No. 2615-S.]

STIPULATION IDENTIFYING DEFENDANTS' LOUD SPEAKER IN SUIT, AND RE CERTAIN DEPOSITIONS

IT IS STIPULATED AND AGREED by the parties hereto that the drawing attached hereto marked "Plaintiff's Exhibit A-1" is a true and correct drawing of Loud Speaker manufactured by Atwater Kent Manufacturing Company and sold in this district by defendant, Ernest Ingold, Inc., within six years last past.

IT IS FURTHER STIPULATED AND AGREED that the testimony and/or depositions heretofore offered by plaintiff in the cases of *The Magnavox Company v. Frederick H. Thompson Company*, No. 2166-S, In Equity, and *The Magnavox Company v. Hart & Reno, et al.*, No. 2534-S, In Equity, of the witnesses Bernard B. Linden, Stafford Warner, Chris Eiferle, and Harry I. Zeman-sky, may be received in this case with the same force and effect as if the witnesses had appeared and testified especially in this cause.

CHAS. E. TOWNSEND

WM. A. LOFTUS

THOS. G. GOULDEN

Attorneys for Plaintiff.

JOHN H. MILLER

A. W. BOYKEN

Attorneys for Defendant.

Dated: March 28, 1932.

(Attached hereto is blue print of Cross Section of Atwater Kent Loud Speaker. Plaintiff's Exhibit A-1)

[Endorsed]: Filed Mar 29 1932. [30]

[Title of Court and Cause Nos. 2615-S and 2616-S]

MEMORANDUM AND ORDER

Two suits brought by The Magnavox Company, a corporation, alleging infringement of two of its patents, involving the same issues, were consolidated for trial. The claims sued upon are No. 8 of Patent No. 1,266,988 and No. 8 of Patent No. 1,448,279. The defenses are invalidity and non-infringement.

Adopting the course followed by the Circuit Court of Appeals of the Second Circuit in *Lektophone Corporation v. Sylo Lighting Fixture Co.*, 16 Fed. (2d) 7, and in *Lektophone Corporation v. Western Electric Co.*, 16 Fed. (2d) 10, and by the Circuit Court of Appeals of the Ninth Circuit in *Lektophone Corporation v. Rola Co.*, 34 Fed. (2d) 764, 773, I find it unnecessary to pass upon the validity of the patents, limited as their interpretation must be by the state of the prior art. And after careful study of the patents, the prior art. And after careful study of the patents, the prior art, the law, and the facts, I have reached the conclusion that there is no infringement of Claim 8 of either patent, and so find. The complainants will be dismissed with costs to

defendants. Findings of fact and conclusions of law in accordance with Rule 42. [31]

So ordered.

A. F. ST. SURE

March 17, 1933.

United States District Judge.

[Endorsed]: Filed Mar 18 1933. [32]

[Title of Court.]

AT A STATED TERM of the Southern Division of the United States District Court for the Northern District of California, held at the Court Room thereof, in the City and County of San Francisco, on Saturday, the 18th day of March, in the year of our Lord one thousand nine hundred and thirty-three.

PRESENT: the Honorable A. F. ST. SURE, District Judge.

No. 2615-

[Title of Cause.]

This cause heretofore tried and submitted, being fully considered, and the Court having filed its Memorandum and Order thereon, it is, in accordance with said Memorandum and Order, Ordered that the bill of complaint herein be and the same is hereby dismissed with costs to the defendant and that a decree be signed, filed and entered herein accordingly upon Findings of Fact and Conclusions of Law to be prepared and filed in accordance with Rule 42. [33]

[Title of Court and Cause No. 2615-S.]

PLAINTIFF'S OBJECTIONS AND EXCEPTIONS TO DEFENDANT'S PROPOSED FINDINGS AND CONCLUSIONS, AND PLAINTIFF'S PROPOSED FINDINGS AND CONCLUSIONS IN LIEU OF AND ADDITIONAL TO THOSE PROPOSED BY DEFENDANT.

Plaintiff objects to the following-designated Conclusions of Law proposed by defendant's counsel and served herein on or about March 23, 1933, and requests the allowance of an exception wherever any such objection may be overruled.

I.

Plaintiff objects to proposed Conclusions of Law designated Numbers "2" to "6", inclusive, on the ground that the same are contrary to law and the evidence.

II.

Plaintiff proposes the following Findings of Facts, in addition to those proposed by defendant:

5.

That the patents in suit, and particularly the claims thereof declared upon herein, have heretofore been found valid, in a contested case tried in this Court and entitled "The Magnavox Company vs. Frederick H. Thompson Company," decided April 9, 1930.

6.

That in said prior adjudication said patents were held to be infringed by a structure substantially similar to the structure involved herein.

7.

That the prior art relied upon herein is substantially the same as was presented in said suit of Magnavox vs. Frederick H. Thompson Company.

8.

That there is no proof that any loud speaker had been [34] conceived or constructed prior to plaintiff's Patent Number 1,266,988, embodying the combination of elements set forth in Claim 8 thereof.

9.

That the proofs show that the combination of elements specified in Claim 8 of said Patent 1,266,988 accomplished a new and useful result in respect to overcoming breakage of fine wires leading from the moving coil to the stationary binding posts, by securing said wires to the surface of the diaphragm.

10.

That there is no proof that any loud speaker had been conceived or constructed prior to plaintiff's Patent 1,448,279, embodying the combination of elements set forth in Claim 8 thereof.

11.

That the proofs show that the combination of elements specified in Claim 8 of said Patent 1,448,279

accomplished a new and useful result in respect to accurate and fine spacing of the central pole piece and circumferential pole piece and the maintenance of the moving coil in said space by affixing it to the outer pole piece and housing or sound box which supports the diaphragm to which said movable coil in turn is secured.

12.

That prior to the inventions of the patents in suit there was not in existence any commercial loud speaker of the moving coil or dynamic type.

13.

That a demand had long existed for a loud speaker of the moving coil or dynamic type, because of its superiority over the iron armature type with respect to volume and faithfulness of reproduction. [35]

14.

That the patentees of the patents in suit, through their assignee, plaintiff herein, in and by the combinations set forth in the patents in suit fulfilled said demand, and the commercial devices produced thereunder were widely sold and publicly acclaimed.

15.

That in respect to the Lodge defense, the proofs show that the structures of the Lodge patent and publications were never actually constructed or operated, except in one form which did not embody the lead-out wires secured to the diaphragm, as in Claim 8 of Patent 1,266,988, or the spacing means

of Claim 8 of Patent 1,448,279; and that the only use made of said device by Lodge was in the nature of a Laboratory demonstration.

16.

That none of the devices depicted in or described in the other prior patents and publications relied upon, is shown to have been put to practical or commercial use for loud speaking purposes.

17.

That the combinations covered by Claim 8 of Patent 1,266,988, and Claim 8 of Patent 1,448,279, constitute inventions.

III.

And as Conclusions of Law, plaintiff proposes the following in lieu of defendant's proposed Conclusions designated "2" to "6":

2.

That Patent 1,266,988, particularly Claim 8 thereof, is valid. [36]

3.

That Patent 1,448,279, particularly Claim 8 thereof, is valid.

4.

That the loud speakers sold by defendant Ernest Ingold, Inc., complained of in the Bill of Complaint herein, more particularly identified as Plaintiff's Exhibit 4, constitute an infringement of Claim 8 of said Patent 1,266,988 and Claim 8 of said Patent 1,448,279.

5.

That a decree be entered as prayed, and a Master appointed to state an accounting of all damages and profits.

CHAS. E. TOWNSEND,

WM. A. LOFTUS,

Attorneys for Plaintiff.

Dated: Mar. 28/33.

Service of copy of the within Plaintiff's Objections and Exceptions to Defendant's Proposed Findings and Conclusions, and Plaintiff's Proposed Findings and Conclusions in Lieu of and Additional to Those Proposed by Defendant, admitted this 28th day of March, A. D. 1933.

JOHN H. MILLER,

A. W. BOYKEN,

for Defendant.

[Endorsed]: Lodged Mar. 29, 1933. [37]

[Title of Court.]

AT A STATED TERM of the Southern Division of the United States District Court for the Northern District of California, held at the Court Room thereof, in the City and County of San Francisco, on Monday, the 10th day of April, in the year of our Lord one thousand nine hundred and thirty-three.

PRESENT: the Honorable A. F. ST. SURE, District Judge.

[Title of Cause.]

No. 2615

After hearing A. Dunham Owen, Esq., for plaintiff, it is Ordered that the plaintiff's objections and exceptions to defendant's proposed findings and conclusions be and the same are hereby overruled and plaintiff allowed an exception to the ruling of the Court. [38]

[Title of Court and Cause No. 2615-S.]

FINDINGS OF FACT AND
CONCLUSIONS OF LAW.

This cause having come on regularly to be heard upon pleadings and proof at this term of court, the parties being represented by counsel and the cause having been argued and duly submitted, upon consideration thereof the Court finds the following facts and conclusions of law.

Findings of Fact.

1.

That plaintiff, The Magnavox Company, is a corporation, organized and existing under the laws of the State of Arizona, with a place of business in the City of Oakland, State of California.

2.

That defendant, Ernest Ingold, Inc., is a corporation, organized and existing under the laws of the

State of California, with a place of business in the City and County of San Francisco, State of California.

3.

That plaintiff, The Magnavox Company, is the owner and holder of all right, title and interest in and to Letters Patent of the United States No. 1,266,988, dated May 21, 1918, and No. 1,448,279, dated March 13, 1923.

4.

That defendant, Ernest Ingold, Inc., has sold, in San Francisco, California, and elsewhere, certain loudspeakers complained of in the bill of complaint herein and more particularly identified as Plaintiff's Exhibit 4 in the transcript of testimony.

Conclusions of Law.

1.

That this court has jurisdiction of the parties hereto and the subject matter hereof. [39]

2.

That this court finds it unnecessary to pass upon the validity of the patents in suit, limited as their interpretation must be by the state of the prior art.

3.

That the loudspeakers sold by defendant, Ernest Ingold, Inc., complained of in the bill of complaint herein and more particularly identified as Plaintiff's Exhibit 4, are not any infringement of claim

8 of Patent No. 1,266,988 nor claim 8 of Patent No. 1,448,279, these being the only two claims in suit.

4.

That plaintiff, The Magnavox Company, is not entitled to the relief prayed for in its bill of complaint, or any part thereof.

5.

That the bill of complaint herein be dismissed.

6.

That defendant, Ernest Ingold, Inc., recover from plaintiff its costs of suit.

A. F. ST. SURE,

U. S. District Judge.

April 1, 1933.

Receipt of a copy of the within Findings of Fact and Conclusions of Law admitted this 23rd day of March, 1933.

TOWNSEND & LOFTUS,

Attorneys for Plaintiff.

[Endorsed]: Filed Apr. 1, 1933. [40]

In the United States District Court for the Northern
District of California, Southern Division.

In Equity No. 2615-S

THE MAGNAVOX COMPANY,

Plaintiff,

vs.

ERNEST INGOLD, INC.,

Defendant.

FINAL DECREE OF DISMISSAL.

This cause came on to be heard at this term and was argued by counsel and submitted to the Court for decision; and upon consideration thereof it was ORDERED, ADJUDGED AND DECREED

That defendant above named has not infringed claim 8 of plaintiff's patent No. 1,266,988 nor claim 8 of plaintiff's patent No. 1,448,279, said two claims being the only claims in suit, and that the bill of complaint herein be and the same is hereby dismissed with costs to defendant taxed in the sum of \$205.23.

Dated: April 1, 1933.

A. F. ST. SURE,

United States District Judge.

Approved as to form:

CHAS. E. TOWNSEND,

WM. A. LOFTUS,

Attorneys for Plaintiff.

[Endorsed]: Filed and entered Apr. 1, 1933. [41]

United States District Court, Northern District of
California, Southern Division.

In Equity No. 2616-S

THE MAGNAVOX COMPANY, a corporation,
Plaintiff,

vs.

STROMBERG CARLSON TELEPHONE MAN-
UFACTURING COMPANY, a corporation;
and GARNETT YOUNG & CO., a corporation,
Defendants.

Patent Infringement:

Patent 1,266,988, Patent 1,448, 279, Patent 1,579,392

BILL OF COMPLAINT.

Comes now THE MAGNAVOX COMPANY, plaintiff above named, and complains of STROMBERG CARLSON TELEPHONE MANUFACTURING COMPANY, a corporation, and GARNETT YOUNG & CO., a corporation, above-named defendants, and for cause of action alleges:

I.

That the plaintiff, THE MAGNAVOX COMPANY, during all the times hereinafter mentioned was and is a corporation duly organized and existing under and by virtue of the laws of the State of Arizona, with a place of business in the City of Oakland, County of Alameda, State of California.

II.

That the defendant STROMBERG CARLSON TELEPHONE MANUFACTURING COMPANY is a corporation organized under the laws of the State of New York, with a regular and established place of business in the City and County of San Francisco, State of California; that the defendant GARNETT YOUNG & CO. is a California corporation with a place of business in the City and County of San Francisco, State of California. [42]

III.

That the jurisdiction of the Court depends upon the Patent Laws of the United States.

IV.

That prior to the 3rd day of July, 1916, Edwin S. Pridham and Peter L. Jensen were the true, original, first and joint inventors of certain new and useful improvements in Amplifying Receivers, not known or used by others in this country before their invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before their invention or discovery thereof, or more than two years prior to their hereinafter-recited application for Letters Patent therefor, and not in public use or on sale in this country for more than two years prior to their said application, and for which no application for Letters Patent in any country foreign to the United States of America had been filed more than twelve

months prior to the filing of the application in this country, and which had not been abandoned; and that being entitled to a patent for said improvements, under the provisions of the Statutes of the United States then in force, said Edwin S. Pridham and Peter L. Jensen did, on the 3rd day of July, 1916, file in the Patent Office of the United States a joint application for Letters Patent on said invention; that said application was duly assigned to Commercial Wireless & Development Company, a corporation organized under the laws of the State of Arizona, before the issuance of said Letters Patent, by assignment duly recorded in the Patent Office of the United States. That thereafter, to-wit, on May 21, 1918, all requirements of the statutes then in force having been complied with, Letters Patent of the United States for said invention, signed, sealed, and executed in due form of law, were duly issued to [43] the said Commercial Wireless & Development Company as assignee of the entire, right, title and interest therein and thereto; that the Letters Patent so issued were numbered 1,266,988, and said Letters Patent or a duly certified copy thereof are ready to be produced as this Court shall direct.

V.

That the Plaintiff, The Magnavox Company, by written assignment is now the sole and exclusive owner of the entire right, title and interest in and to the aforesaid Letters Patent 1,266,988, including all rights to recover for past infringement thereof.

VI.

That prior to the 28th day of April, 1920, Edwin S. Pridham and Peter L. Jensen were the true, original, first and joint inventors of certain new and useful improvements in Electrodynamic Receivers, not known or used by others in this country before their invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before their invention or discovery thereof, or more than two years prior to their hereinafter-recited application for Letters Patent therefor, and not in public use or on sale in this country for more than two years prior to their said application, and for which no application for Letters Patent in any country foreign to the United States of America had been filed more than twelve months prior to the filing of the application in this country, and which had not been abandoned; and that being entitled to a patent for said improvements, under the provisions of the Statutes of the United States then in force, said Edwin S. Pridham and Peter L. Jensen did, on the 28th day of April, 1920, file in the Patent Office of the United States a joint Application for Letters Patent on said invention; that said application [44] was duly assigned to Plaintiff, The Magnavox Company, before the issuance of said Letters Patent, by an assignment duly recorded in the Patent Office; that thereafter, to-wit, on the 13th day of March, 1923, all requirements of the statutes then in force having been complied with,

Letters Patent of the United States for said invention, signed, sealed, and executed in due form of law, were duly issued to the said The Magnavox Company, as assignee of the entire right, title and interest therein and thereto; that the Letters Patent so issued were numbered 1,448,279, and said Letters Patent or a duly certified copy thereof, are ready to be produced as this Court shall direct.

VII.

That prior to the 20th day of March, 1922, Edwin S. Pridham and Peter L. Jensen were the true, original, first and joint inventors of certain new and useful improvements in Electrodynamic Receivers, not known or used by others in this country before their invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before their invention or discovery thereof, or more than two years prior to their hereinafter recited application for Letters Patent therefor, and not in public use or on sale in this country for more than two years prior to their said application, and for which no application for Letters Patent in any country foreign to the United States of America had been filed more than twelve months prior to the filing of the application in this country, and which had not been abandoned; and that being entitled to a patent for said improvements, under the provisions of the Statutes of the United States then in force, said Edwin S. Pridham and Peter L. Jensen did, on

the 20th day of March, 1922, file in the Patent Office of the United States a joint application for [45] Letters Patent on said invention; that said application was duly assigned to Plaintiff, The Magnavox Company, before the issuance of said Letters Patent by an assignment duly recorded in the Patent Office; that thereafter, to wit on the 6th day of April, 1926, all requirements of the statutes then in force having been complied with, Letters Patent of the United States for said invention, signed, sealed and executed in due form of law, were duly issued to the said The Magnavox Company, as assignee of the entire right, title and interest therein and thereto; that the Letters Patent so issued were numbered 1,579,392, and said Letters Patent or a duly certified copy thereof, are ready to be produced as this Court shall direct.

VIII.

That Plaintiff is still the owner of all right, title, and interest in and to the aforesaid inventions, and in and to the aforesaid Letters Patents.

IX.

That the inventions of the several Letters Patents aforesaid are capable of conjoint use, and have been so used by Defendants herein.

X.

That the said inventions patented as aforesaid are of great value and utility to Plaintiff, and to

the public generally; that the Plaintiff and its licensees, since the dates of said inventions, have caused to be manufactured and sold great numbers of said devices embodying the inventions of said Letters Patent and each of them; that Plaintiff has expended large sums of money in causing the said inventions to be developed; and has built up a large and profitable business for the exploitation of said devices, so that the said inventions and patent rights have been and are of great utility and great [46] value to the Plaintiff and its licensees, and, but for the unlawful acts of the Defendants herein complained of, would have been of greater value and profit to them.

XI.

That the devices caused to be manufactured and sold by Plaintiff and its licensees, embodying the inventions of the aforesaid Letters Patents, and each of them, have been and are duly marked "Patented", with the date and/or number of each of said Letters Patents, all in the manner prescribed by the Statutes of the United States; and Plaintiff's ownership of said inventions and Letters Patents has been widely recognized and acquiesced in by the public and by the trade generally.

XII.

Plaintiff further shows that on the 16th day of August, 1928, it filed a suit in equity in the District Court of the United States for the Northern District of California, Southern Division, against Frederick H. Thompson Company, defendant, for

the infringement of the said Letters Patents here in suit, being suit in Equity No. 2166-S; that the pleadings in the said cause were in the usual form; that the said Letters Patents were assailed for want of invention and novelty and that the said Edwin S. Pridham and Peter L. Jensen were not the original and first inventors and discoverers of the subject matter of the said Letters Patents or of any material or substantial part thereof, and that the same or material or substantial parts thereof had been in public use and on sale in this country prior to said invention and for more than two years prior to the respective applications for said Letters Patents, and that the same had been described and illustrated in printed publications prior to the dates of said inventions of said Edwin S. Pridham and Peter L. Jensen; that after a trial before said Court and the examination of wit- [47] nesses and the introduction of documentary evidence by the respective parties and the evidence being closed and argued by the respective parties the cause was submitted to the Court; and after due consideration said Court on the 9th day of April, 1930, sustained said patents and each of them and adjudged the same to be valid in all respects, holding that said patents and each of them represented a new, useful and patentable invention, and that the same was infringed.

XIII.

That, well knowing the premises, and with intent to injure and defraud the Plaintiff, the Defendants

have jointly and severally and since the grant of said Letters Patents and each of them, and within six years prior to the filing of this Bill of Complaint, and within the Northern District of California, and elsewhere within the United States, infringed upon said Letters Patents and each of them, by making and/or selling and/or using devices embodying the inventions of each of said Letters Patents, which said devices infringed and infringe upon said Letters Patents and each of them and each and all of the claims thereof, by making and/or selling devices embodying the inventions of each of said Letters Patents and of the several claims thereof, all without the license or consent of Plaintiff and in defiance of Plaintiff's rights, and threaten to continue to so infringe, all to the great and irreparable damage of the Plaintiff and to the unlawful gain and profit of the Defendants.

WHEREFORE, Plaintiff prays a decree of this Court against the Defendants and each of them, as follows:

First. That upon the filing of this Bill of Complaint a preliminary injunction be granted, enjoining and restraining the Defendants, and each of them, their respective agents, servants, attorneys, and employees, *pendente lite*, from making, using or selling any apparatus which infringes upon said [48] Letters Patents, in violation of Plaintiff's rights aforesaid.

Second. That upon the final hearing defendants, and each of them, their respective servants, agents, attorneys and employees be permanently and finally enjoined and restrained from making, using or selling any device, machine or apparatus which infringes upon said Letters Patents Numbers 1,266,988, 1,448,279, and 1,579,392, in violation of plaintiff's rights as aforesaid, and that a writ of injunction be issued out of and under the seal of this Court enjoining the said defendants and each of them, their respective agents, servants, attorneys and employees, as aforesaid.

Third. That plaintiff have and recover from the defendant the profits realized by the defendants respectively and the damages sustained by the plaintiff from and by reason of the infringement aforesaid, together with costs of suit, and that the said damages be trebled by reason of the willful nature of the infringement by defendants herein, and that plaintiff have such other and further relief as to the Court may seem proper and in accordance with equity and good conscience.

CHAS. E. TOWNSEND

WM. A. LOFTUS

THOS. G. GOULDEN

Attorneys for Plaintiff. [49]

State of California

City and County of San Francisco—ss.

On this 15th day of April, 1930, before me personally appeared EDWIN S. PRIDHAM, who, being by me duly sworn, deposes and says that he is

Vice-President of THE MAGNAVOX COMPANY, the Plaintiff herein; that he has read the foregoing Bill of Complaint, and that the statements therein contained are true, of his own knowledge, except so far as they are alleged to be stated on information and belief, as to which statements deponent believes them to be true.

EDWIN S. PRIDHAM

Sworn to and subscribed before me this 15th day of April, 1930.

[Seal]

W. W. HEALEY

Notary Public, City and County of San Francisco
State of California.

My commission expires August 29, 1933.

[Endorsed]: Filed, April 16, 1930. [50]

[Title of Court and Cause No. 2616-K.]

ANSWER

The defendants, Stromberg Carlson Telephone Manufacturing Company and Garnett Young & Co., answering the bill of complaint allege as follows:

1. Answering paragraph I of said bill, defendants are without knowledge of the matters alleged in said paragraph, and therefore deny the same.
2. Answering paragraphs II and III of said bill, defendants admit the allegations contained in said paragraphs.
3. Answering paragraph IV of said bill, defendants admit that on or about July 3rd, 1916, Edwin

S. Pridham and Peter L. Jensen filed in the United States Patent Office an application for Letters Patent, and that on May 21, 1918, Letters Patent No. 1,266,988, issued to the Commercial Wireless & Development Company, and defendants, upon information and belief, deny each and all of the remaining allegations in said paragraph IV.

4. Answering paragraph V of said bill, defendants are without knowledge of the matters alleged in said paragraph and therefore deny the same.

5. Answering paragraph VI of said bill, defendants admit that on or about April 28, 1920 Edwin S. Pridham and Peter L. [51] Jensen filed in the United States Patent Office an application for Letters Patent, and that on March 13, 1923, Letters Patent No. 1,448,279 issued to The Magnavox Company, and defendants, upon information and belief, deny each and all of the remaining allegations in said paragraph VI.

6. Answering paragraph VII of said bill, defendants admit that on or about March 20, 1922 Edwin S. Pridham and Peter L. Jensen filed in the United States Patent Office an application for Letters Patent and that on April 6, 1926, Letters Patent No. 1,579,392 issued to The Magnavox Company, and defendants, upon information and belief, deny each and all of the remaining allegations in said paragraph VII.

7. Answering paragraph VIII of said bill, defendants are without knowledge of the matters alleged in said paragraph and therefore deny the same.

8. Answering paragraph IX of said bill, defend-

ants deny the allegations contained in said paragraph.

9. Answering Paragraphs X and XI of said bill, defendants are without knowledge of the matter alleged in said paragraphs and therefore deny the same.

10. Answering Paragraph XII of said bill, defendants admit that plaintiff filed a suit in equity in the District Court of the United States for the Northern District of California, Southern Division, against Frederick H. Thompson Company for infringement of the said letters Patent here in suit, and that said suit was heard and that a decree was rendered in favor of the plaintiff, but defendants are without knowledge of the other matters alleged in said paragraph and therefore deny each and all of the remaining allegations in said paragraph.

11. Answering paragraph XIII of said bill, defendants deny each and all of the allegations contained in said paragraph.

12. Defendants, upon information and belief, allege that [52] each of the claims of the patents in suit is invalid and void because Edwin S. Pridham and Peter L. Jensen were not the original and first inventors of the subject matter of any of the claims of said patents, or of any substantial or material part thereof, but that the same in all their material and substantial parts, before the alleged inventions or discoveries thereof, more than two years prior to the filing dates of the applications, and more than two years before claims therefore were made, were known and used by others in this country, and were patented and described in printed publications in this and foreign countries. The patents and printed publications above referred to, insofar as they at present have been ascertained are as follows:

UNITED STATES PATENTS

Patentee	Number	Issue Date
Siemens	149,797	April 14, 1874
Edison	203,013	April 30, 1878
Eccard	214,029	April 8, 1879
Cook	227,736	May 18, 1880
Morris	236,239	January 4, 1881
Russell	238,253	March 1, 1881
Bell	241,184	May 10, 1881
Milliken	262,811	August 15, 1882
Cheever	281,240	July 17, 1883
Rogers	297,168	April 22, 1884
Taylor	305,980	September 30, 1884
Taylor	314,155	March 17, 1885
Emmner	346,031	July 20, 1886
Mather	387,310	August 7, 1888
Rose	354,241	December 14, 1886
Vogt	476,583	June 7, 1892
Perry	483,123	November 15, 1892
Perry	509,095	November 21, 1893
Richards	521,220	June 12, 1894
Shreeve	602,174	April 12, 1898
Burns	623,702	April 25, 1899
Tommasina	700,161	May 13, 1902
Dean	817,140	April 3, 1906
Kaisling	903,197	November 10, 1908
Pearson	903,745	November 10, 1908
Vreeland	930,508	August 10, 1909
Vreeland	936,684	October 12, 1909
Pollak	939,625	November 9, 1909
Oliver	951,695	March 8, 1910

Patentee	Number	Issue Date
Johnsen	1,075,786	October 14, 1913
Jensen & Pridham	1,088,283	February 24, 1914
Pridham & Jensen	1,105,924	August 4, 1914

[53]

BRITISH PATENTS

Siemens	4,685 of 1877	
Thompson	11,501 of 1885	
Lodge	9,712 of 1898	April 27, 1898
Evershed	16,895 of 1909	July 20, 1909
Brown	29,833 of 1910	
King	131,041	
Signal Gesellschaft, etc.	147,946	Oct. 10, 1921 (Accepted)

FRENCH PATENTS

Brown	27,812 of 1924
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NORWEGIAN PATENTS

Johnson	22,331
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DANISH PATENTS

Johnson-	15,700
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PUBLICATIONS

- Nature, January 10, 1878, Article by Romanis, p. 201
 Popular Science, 1878, Edison Telephone, p. 136
 Physikalische Zeitschrift, Vol. 10, No. 9, Moving
 Coil Telephone, pp. 310, 312
 Electrical Engineer, March 2, 1899, Article by Lodge,
 pp. 246-7
 Institute of Electrical Engineers, London, Vol.
 XXVII, No. 565, (1898) Article by Lodge.

And by other letters patent and publications which defendant prays leave to add hereto by amendment when ascertained.

13. Defendants, upon information and belief, allege that the said Edwin S. Pridham and Peter L. Jensen were not the original and first inventors of any of the alleged improvements described and claimed in any of the patents in suit, but the same, in all their material and substantial parts, before the alleged inventions or discoveries thereof, were invented by, known to, and/or used by the persons named as inventors in the patents listed in paragraph 12 hereof, such [54] persons now residing, to the best of defendant's knowledge and belief, at the places specified in said patents, and also by other persons whose names are at present unknown to the defendants, but which, when known, defendants pray leave to insert in this answer by amendment.

14. Defendants allege, upon information and belief, with respect to each of the claims of the patents here in suit, that it is invalid and void, because in view of the state of the art at the time of the alleged invention thereof, no exercise of invention was required to produce the apparatus purporting to be patented by any of said claims, but, on the contrary, the production of said apparatus did not involve patentable invention, being merely the expected skill of those experienced in the art.

15. Defendants allege, upon information and belief, that by reason of the proceedings in the Patent Office during the prosecution of the applications which resulted in the patents here in suit, and by the acts, admissions, statements, and representations

made by or on behalf of the applicants, each of the claims of the said patents is invalid, and the plaintiff cannot validly claim for any of said claims such construction or interpretation, were the same otherwise possible, as would cause any of the claims to cover and include any apparatus employed by the defendants.

16. Defendants, upon information and belief, allege that the subject matter of each of the patents here in suit was abandoned to the public, because of unreasonable delay in making and asserting the claims; because said claims were not presented until more than two years after the subject matter thereof had been in public use in the United States and/or described in patents and printed publications; and that the plaintiff is estopped to assert that the subject matter of any of said claims may be validly claimed in the said [55] patents in suit.

WHEREFORE, defendants pray that the said bill of complaint be dismissed with costs to the defendants.

STROMBERG CARLSON TELEPHONE
MANUFACTURING COMPANY,

By W. Roy McCanne,
President.

GARNETT YOUNG & CO.,
By Miller & Boyken.

JOHN H. MILLER,
A. W. BOYKEN,
Solicitors for Defendants.

D. CLYDE JONES,
Counsel for Defendants.

State of New York,
County of Monroe.—ss.

W. Roy McCanne, being duly sworn, deposes and says that he is President of STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY, one of the defendants herein, that he has read the foregoing answer and knows the contents thereof; that the same is true of his own knowledge except as to the matters therein stated to be alleged upon information and belief, and that as to those matters he believes it to be true.

W. ROY McCANNE.

Sworn to before me this 10th day of June, 1930.

[Seal]

ALBERT G. KOBER,

Notary Public.

[Endorsed]: Receipt of a copy of the within Answer admitted this 13th day of September, 1930.

CHAS. E. TOWNSEND,

WM. A. LOFTUS,

Attorney for Plaintiff.

Filed September 15, 1930. [56]

[Title of Court & Cause No. 2616-S.]

AMENDMENTS TO ANSWER.

Now come the defendants and by leave of Court first had and obtained files the following amendments to their Answer heretofore filed:

AMENDMENT NO. 1.

On page 9, after line 19, add to the list of patents therein specified the following:

Name of Patentee	Date of Issuance	Number of Patent
Cheever	Jan. 22, 1884	292,203
Tonmmasina	May 13, 1902	700,161

AMENDMENT NO. 2.

On page 10, after line 20, add the following:

PRIOR KNOWLEDGE.

And for a further and separate defense, these defendants allege on information and belief that Edwin S. Pridham and Peter L. Jensen were not the original and first inventors or discoverers of the thing sought to be patented by the several letters patent or either of them herein sued on, or any material or substantial part thereof, but that before the alleged invention thereof by said Edwin S. Pridham and Peter L. Jensen the same was known to the following named persons, viz:

Each of the patentees named in the list of patents pleaded in the Answer on pages 8, 9, and 10.

Radio Corporation of America,
residing at New York City.

Oliver Joseph Lodge,
residing at Liverpool, England.

Reginald A. Fessenden,
residing at Chestnut Hill, Mass.

Fritz P. Mansbendel,
residing at New York City.

Jesse B. Murphy,
residing at Wilkinsburg, Pennsylvania. [57]

Clair L. Farrand,
residing at Stamford, Connecticut.

William H. Davis,
residing at New York City.

Edmond L. Ragonot,
residing at Paris, France.

Edward W. Kellogg,
residing at Schnectady, New York.

WHEREFORE, defendants renew the prayer of
their original answer.

JOHN H. MILLER,

A. W. BOYKEN,

Attorneys for Defendants.

CONSENT TO FILING ABOVE AMENDMENT
TO ANSWER.

Plaintiff hereby consents to the filing of the above
amendments to the answer of defendants without
the necessity of a formal motion by defendants
therefor.

CHAS. E. TOWNSEND,

WM. A. LOFTUS,

Attorneys for Plaintiff.

San Francisco, California,

February 11, 1932.

[Endorsed]: Filed Feb. 13, 1932. [58]

[Title of Court & Cause No. 2616-S.]

SECOND AMENDMENT TO ANSWER
OF DEFENDANT.

Now comes defendant and by leave of Court files the following amendment to its answer, viz:

On page 5 after line 25 add the following additional printed publication, viz:

The Electrician, pages 262-71, published at London, England, on December 16, 1898; also pages 305-9 of said publication, published December 23, 1898; also pages 366-7 of said publication, published January 6, 1899; also pages 402-5 of said publication, published January 13, 1899.

WHEREFORE, defendant renews the prayer of its answer.

JOHN H. MILLER,
A. W. BOYKEN,
N. D. THOMAS,

Attorneys for Defendant.

March 8, 1932.

[Endorsed]: Service of the within Second Amendment to Answer of Defendant admitted this 8th day of March, A. D. 1932, and consent to filing thereof is hereby given.

CHAS. E. TOWNSEND,
WM. A. LOFTUS,

Attorneys for Plaintiff.

Filed March 14, 1932. [59]

[Title of Court and Cause No. 2616-S.]

STIPULATION IDENTIFYING DEFENDANTS' LOUD SPEAKER IN SUIT, AND RE CERTAIN DEPOSITIONS.

IT IS STIPULATED AND AGREED by the parties hereto that the drawing attached hereto marked "Plaintiff's Exhibit A-1" is a true and correct drawing of Loud Speaker manufactured by defendant Stromberg-Carlson Telephone Manufacturing Company, and sold in this district by defendant Garnett Young & Co., within six years last past.

IT IS FURTHER STIPULATED AND AGREED that the testimony and/or depositions heretofore offered by plaintiff in the cases of The Magnavox Company v. Frederick H. Thompson Company, No. 2166-S, In Equity, and The Magnavox Company v. Hart & Reno, et al., No. 2534-S, In Equity, of the witnesses Bernard B. Linden, Stafford Warner, Chris Eiferle, and Harry I. Zemansky, may be received in this case with the same force and effect as if the witnesses had appeared and testified especially in this cause.

CHAS. E. TOWNSEND,

WM. A. LOFTUS,

THOS. G. GOULDEN,

Attorneys for Plaintiff.

JOHN H. MILLER,

A. W. BOYKEN,

Attorneys for Defendant.

Dated: March 28, 1932.

(Here follows drawing of cross-section of Stromberg Carlson Loud Speaker being Plaintiff's Exhibit No. 2.)

[Endorsed]: Filed Mar. 29, 1932. [60]

[Title of Court and Cause Nos. 2516-S and 2616-S.]

MEMORANDUM AND ORDER

Two suits brought by The Magnavox Company, a corporation, alleging infringement of two of its patents, involving the same issues, were consolidated for trial. The claims sued upon are No. 8 of Patent No. 1,266,988 and No. 8 of Patent No. 1,448,279. The defenses are invalidity and noninfringement.

Adopting the course followed by the Circuit Court of Appeals of the Second Circuit in *Lektophone Corporation v. Sylo Lighting Fixture Co.*, 16 Fed. (2d) 7, and in *Lektophone Corporation v. Western Electric Co.*, 16 Fed. (2d) 10, and by the Circuit Court of Appeals of the Ninth Circuit in *Lektophone Corporation v. Rola Co.*, 34 Fed. (2d) 764, 773, I find it unnecessary to pass upon the validity of the patents, limited as their interpretation must be by the state of the prior art. And after careful study of the patents, the prior art, the law, and the facts, I have reached the conclusion that there is no infringement of Claim 8 of either patent, and so find. The complaints will

be dismissed with costs to defendants. Findings of fact and conclusions of law in accordance with Rule 42.

So ordered.

A. F. ST. SURE

United States District Judge.

March 17, 1933.

[Endorsed]: Filed Mar 18 1933 [61]

[Title of Court.]

AT A STATED TERM of the Southern Division of the United States District Court for the Northern District of California, held at the Court Room thereof, in the City and County of San Francisco, on Saturday, the 18th day of March, in the year of our Lord one thousand nine hundred and thirty-three.

PRESENT: the Honorable A. F. St. Sure, District Judge.

No. 2616

[Title of Cause.]

This cause heretofore tried and submitted, being fully considered, and the Court having filed its Memorandum and Order thereon, it is, in accordance with said Memorandum and Order, Ordered that the bill of complaint herein be and the same is hereby dismissed with costs to the defendants and that a decree be signed, filed and entered herein accordingly upon Findings of Fact and Conclusions

of Law to be prepared and filed in accordance with Rule 42. [62]

[Title of Court and Cause No. 2616-S.]

PLAINTIFF'S OBJECTIONS AND EXCEPTIONS TO DEFENDANT'S PROPOSED FINDINGS AND CONCLUSIONS, AND PLAINTIFF'S PROPOSED FINDINGS AND CONCLUSIONS IN LIEU OF AND ADDITIONAL TO THOSE PROPOSED BY DEFENDANTS.

Plaintiff objects to the following-designated Conclusions of Law proposed by defendants' counsel and served herein on or about March 23, 1933, and requests the allowance of an exception wherever any such objection may be overruled.

I.

Plaintiff objects to proposed Conclusions of Law designated Numbers "2" to "6", inclusive, on the ground that the same are contrary to law and the evidence.

II.

Plaintiff proposes the following Findings of Facts, in addition to those proposed by defendants:

5.

That the patents in suit, and particularly the claims thereof declared upon herein, have heretofore been found valid, in a contested case tried in this Court and entitled "The Magnavox Company

vs. Frederick H. Thompson Company", decided April 9, 1930.

6.

That in said prior adjudication said patents were held to be infringed by a structure substantially similar to the structure involved herein.

7.

That the prior art relied upon herein is substantially the same as was presented in said suit of Magnavox vs. Frederick H. Thompson Company.

[63]

8.

That there is no proof that any loud speaker had been conceived or constructed prior to plaintiff's Patent Number 1,266,988, embodying the combination of elements set forth in Claim 8 thereof.

9.

That the proofs show that the combination of elements specified in Claim 8 of said Patent 1,266,988 accomplished a new and useful result in respect to overcoming breakage of fine wires leading from the moving coil to the stationary binding posts, by securing said wires to the surface of the diaphragm.

10.

That there is no proof that any loud speaker had been conceived or constructed prior to plaintiff's Patent 1,448,279, embodying the combination of elements set forth in Claim 8 thereof.

11.

That the proofs show that the combination of elements specified in Claim 8 of said Patent 1,448,279 accomplished a new and useful result in respect to accurate and fine spacing of the central pole piece and circumferential pole piece and the maintenance of the moving coil in said space by affixing it to the outer pole piece and housing or sound box which supports the diaphragm to which said movable coil in turn is secured.

12.

That prior to the inventions of the patents in suit there was not in existence any commercial loud speaker of the moving coil or dynamic type.

13.

That a demand had long existed for a loud speaker of [64] the moving coil or dynamic type, because of its superiority over the iron armature type with respect to volume and faithfulness of reproduction.

14.

That the patentees of the patents in suit, through their assignee, plaintiff herein, in and by the combination set forth in the patents in suit fulfilled said demand, and the commercial devices produced thereunder were widely sold and publicly acclaimed.

15.

That in respect to the Lodge defense, the proofs show that the structures of the Lodge patent and

publications were never actually constructed or operated, except in one form which did not embody the lead-out wires secured to the diaphragm, as in Claim 8 of Patent 1,266,988, or the spacing means of Claim 8 of Patent 1,448,279; and that the only use made of said device by Lodge was in the nature of a laboratory demonstration.

16.

That none of the devices depicted in or described in the other prior patents and publications relied upon, is shown to have been put to practical or commercial use for loud speaking purposes.

17.

That the combinations covered by Claim 8 of Patent 1,266,988, and Claim 8 of Patent 1,448,279, constitute inventions.

III.

And as Conclusions of Law, plaintiff proposes the following in lieu of defendants' proposed Conclusions designated "2" to "6": [65]

2.

That Patent 1,266,988, particularly Claim 8 thereof, is valid.

3.

That Patent 1,448,279, particularly Claim 8 thereof, is valid.

4.

That the loud speakers sold by defendant Garnett Young & Company, complained of in the Bill of

Complaint herein, more particularly identified as Plaintiff's Exhibit 3, which said loud speakers are manufactured by defendant Stromberg-Carlson Telephone Manufacturing Company, constitute an infringement of Claim 8 of said Patent 1,266,988 and Claim 8 of said Patent 1,448,279.

5.

That a decree be entered as prayed, and a Master appointed to state an accounting of all damages and profits.

CHAS. E. TOWNSEND

WM. A. LOFTUS

Attorneys for Plaintiff.

Dated: Mar. 28/33.

Service of copy of the within Plaintiff's Objections and Exceptions to Defendants' Proposed Findings and Conclusions, and Plaintiff's Proposed Findings and Conclusions in Lieu of and Additional to Those Proposed by Defendants, admitted this 28th day of March, A. D., 1933.

JOHN N. MILLER

A. W. BOYKEN

for Defendants.

[Endorsed]: Lodged Mar. 29, 1933. [66]

[Title of Court.]

AT A STATED TERM of the Southern Division of the United States District Court for the Northern District of California, held at the Court Room thereof, in the City and County of San Francisco, on Monday, the 10th day of April, in the year of our Lord one thousand nine hundred and thirty-three.

PRESENT: the Honorable A. F. St. Sure, District Judge.

No. 2616

[Title of Cause.]

After hearing A. Dunham Owen, Esq., for plaintiff, it is Ordered that the plaintiff's objections and exceptions to defendant's proposed findings and conclusions be and the same are hereby overruled and plaintiff allowed an exception to the ruling of the Court. [67]

[Title of Court and Cause No. 2616-S.]

FINDINGS OF FACT AND CONCLUSIONS
OF LAW

This cause having come on regularly to be heard upon pleadings and proof at this term of court, the parties being represented by counsel and the cause having been argued and duly submitted, upon consideration thereof the Court finds the following facts and conclusions of law.

Findings of Fact.

1.

That plaintiff, The Magnavox Company, is a corporation, organized and existing under the laws of the State of Arizona, with a place of business in the City of Oakland, State of California.

2.

That defendant Stromberg Carlson Telephone Manufacturing Company is a corporation, organized and existing under the laws of the State of New York, with a regular and established place of business in the City and County of San Francisco, State of California; that the other defendant, Garnett Young & Co., is a corporation, organized and existing under the laws of the State of California, with a place of business in the City and County of San Francisco, State of California.

3.

That plaintiff, The Magnavox Company, is the owner and holder of all right, title and interest in and to Letters Patent of the United States No. 1,266,988, dated May 21, 1918, and No. 1,448,279, dated March 13, 1923. [68]

4.

That defendant Garnett Young & Co. has sold, in San Francisco, California, and elsewhere, certain loudspeakers complained of in the bill of complaint herein and more particularly identified as Plaintiff's Exhibit 3 in the transcript of testimony, which said loudspeakers were manufactured by defendant

Stromberg Carlson Telephone Manufacturing Company.

Conclusions of Law

1.

That this court has jurisdiction of the parties hereto and the subject matter hereof.

2.

That this court finds it unnecessary to pass upon the validity of the patents in suit, limited as their interpretation must be by the state of the prior art.

3.

That the loudspeakers sold by defendant Garnett Young & Co., complained of in the bill of complaint herein and more particularly identified as Plaintiff's Exhibit 3, which said loudspeakers were manufactured by defendant Stromberg Carlson Telephone Manufacturing Company, are not an infringement of claim 8 of Patent No. 1,266,988 nor claim 8 of Patent No. 1,266,988 nor claim 8 of Patent No. 1,448,279, these being the only two claims in suit.

4.

That plaintiff, The Magnavox Company, is not entitled to the relief prayed for in its bill of complaint, or any part thereof.

5.

That the bill of complaint herein be dismissed. [69]

6.

That defendants recover from plaintiff their costs of suit.

A. F. ST. SURE

U. S. District Judge.

April 1, 1933.

Receipt of a copy of the within Findings of Fact and Conclusions of Law admitted this 23rd day of March, 1933.

TOWNSEND & LOFTUS

Attorneys for Plaintiff.

[Endorsed]: Filed Apr 1 1933 [70]

In the United States District Court for the Northern District of California, Southern Division.

In Equity No. 2616-S.

THE MAGNAVOX COMPANY, a
corporation,

Plaintiff,

vs.

STROMBERG CARLSON TELEPHONE
MANUFACTURING COMPANY, a
corporation, and GARNETT
YOUNG & CO., a corporation,

Defendants.

FINAL DECREE OF DISMISSAL.

This cause came on to be heard at this term and was argued by counsel and submitted to the Court

for decision; and upon consideration thereof it was
ORDERED, ADJUDGED AND DECREED

That defendants above named, and each of them, have not infringed claim 8 of plaintiff's Patent No. 1,266,988 nor claim 8 of plaintiff's Patent No. 1,448,279, said two claims being the only claims in suit, and that the bill of complaint herein be and the same is hereby dismissed with costs to defendants taxed in the sum of \$203.22.

Dated: April 1, 1933,

A. F. ST. SURE

U. S. District Judge.

Approved as to form:

CHAS. E. TOWNSEND

WM. A. LOFTUS

Attorneys for Plaintiff.

[Endorsed]: Filed and entered Apr 1 1933 [71]

[Title of Court and Cause Nos. 2615-S and 2616-S.]

STATEMENT OF EVIDENCE.

Before A. F. ST. SURE,

U. S. District Judge. Tuesday, April 5, 1932.

It was stated to the Court as agreeable to the parties to have the cases consolidated for trial; whereupon a consolidation was ordered. The two patents in suit are Pridham and Jensen Patent No. 1,266,988, Claim 8; and Pridham and Jensen Patent No. 1,448,279, Claims 8, 9 and 10 (Claims 9 and 10 subsequently withdrawn). It was further agreed

that title to these patents is in plaintiff; and plaintiff's corporate status was admitted.

(NOTE: The exhibits of both parties were formally offered in evidence and properly marked without objection unless otherwise indicated in the Statement of Evidence.)

Mr. LOFTUS: I will call Mr. Pridham. Here are drawings of the two defendants' devices in issue, your Honor. There have been filed here stipulations in each case, attached to which is a drawing exactly [74] as I have presented to the Court. It is agreed that these devices have been manufactured and sold within this district within the past six years, as alleged in the Bills of Complaint. These stipulations have been filed. I do not believe it is necessary to offer any further drawings. I offer in evidence as Plaintiff's Ex. 1, the drawing attached to the stipulation in the Ernest Ingold case. I offer in evidence, as Plf's. Ex. 2, the drawing attached to the stipulation in the Stromberg-Carlson Case. Here is the physical structure that is involved in the Stromberg-Carlson Case. I offer that in evidence as Plf's. Ex. 3. The defendant's device in the other case, in the Ingold Case, I now offer that in evidence as Plf's. Ex. 4.

TESTIMONY OF EDWIN S. PRIDHAM,
A Witness on Behalf of Plaintiff.

Direct Examination by Mr. Loftus:

My name is EDWIN S. PRIDHAM. I am 50 years old and reside in Oakland, California. I am

(Testimony of Edwin S. Pridham.)

an Electrical Engineer by profession. I am the Edwin S. Pridham who is mentioned in both of the patents here in suit. I am connected with the Commercial Wireless & Development Company which is mentioned as the assignee of the first patent in suit, to-wit, 1,266,988, which patent was transferred in writing to the plaintiff here in suit. I can produce a copy of that assignment. I was also connected with the Magnavox Company, the successor of the Commercial Wireless & Development Company. The Magnavox Company assumed all right, title and interest to the patents of the Commercial Wireless & Development Company.

Q. Will you explain briefly to the Court the purpose and the operation of the device of the first patent in suit, 1,266,988?

A. In regard to this patent, especially Claim 8, which reads: [75]

“In a receiver for telephony the combination with a soundbox and its diaphragm, of a magnetic field, a vibrating conducting coil for the telephonic currents disposed in said field, and rigidly secured to the diaphragm and connections between said coil and the operating circuit comprising thin metallic strips secured to the diaphragm.”

In all of our early experiments with these moving-coil instruments, we found it was very essential to wind the moving coil with a thin wire, perhaps 35 or 36 Brown & Sharp gauge. That is about the size of a horse hair. You do that in order to

(Testimony of Edwin S. Pridham.)

get a large amount of wire into this narrow area, so that the magnetic reactions will take place properly. In the demonstrations we had with this instrument, we soon found it was utterly impossible to bring out this fine wire of the movable coil to an operating circuit, because if you did that the vibrations of the coil would crystallize the wire and break it, just like anybody can take a wire in their fingers and by twisting it back and forth break the wire. This particular thing gave us a great deal of trouble in the early days of the demonstrations. We would have to have two or three instruments and throw-over switches, wherein we could put a new instrument in if one broke down. We found by a number of experiments that the way to overcome this trouble was to attach the fine wire of the coil to a stationary support which moved with the coil and then attach the operating wire, or, I might say, the wire which leads to the operating circuit, to the fine wire of the coil at this point where the fine wire was secured to the diaphragm. We did this and it solved completely the problem of breaking the wires. Practically every dynamic instrument that ever has been made since, with a few exceptions which I will enumerate later, has used this method of bringing the fine wire [76] of the movable coil out to the operating circuit. The only exception that I know of in which this is not done was an instrument in which the movable coil consisted of one single turn of heavy copper strip, which was disposed in the

(Testimony of Edwin S. Pridham.)

air gap. This single turn of heavy copper strip also formed one turn of the secondary of the induction coil. Consequently there was no need in a structure like that of attaching a fine wire to the diaphragm, the movable element, itself, was practically a bar of copper. In all instruments wherein the wire of the movable coil is a fine wire, it is absolutely necessary to attach that fine wire to some support that flexes with the coil, and then attach at that point a more flexible wire which leads to the operating circuit. In this manner we overcame all difficulty of breaking the wire in the movable coil.

(Mr. LOFTUS: I offer in evidence a copy of patent No. 1,266,988 just referred to by the witness, as Pltf's. Exh. 5. I also offer the second patent in suit, No. 1,448,279, as Pltf's. Ex. 6.)

Mr. LOFTUS: Q. Now, turn to the second patent in suit, which is marked here "Plf's Ex. 6," and explain, with reference to claims 8, 9, and 10, particularly, the purpose and operation thereof.

A. In regard to patent No. 1,448,279, this represents a moving coil type of reproducer. Claim 8, which reads upon the structures, I will describe as follows: In this structure there is a pot-shaped magnet with a core and an energizing coil on the core. This is a top plate which closes this pot. The top plate has a hole in it of sufficient diameter to take the central pole with an annular clearance around that central pole. Within the casing we have means for holding those two poles in spaced [77]

(Testimony of Edwin S. Pridham.)

relation. The diaphragm and the sound box with the coil attached to the diaphragm is arranged in that annular space between the core and the top plate, the diaphragm being mounted on a support which is attached to the top plate. Claim 9 reads just like that, with the exception that we have an insulating base for the structure. That was simply the support on which this spot-shaped magnet was held.

Claim 10 is practically the same, with a little different wording in the claims. The idea in this particular patent is to have a magnetic circuit with an annular air gap of very narrow width and minimum cross section in order to get a strong concentric magnetic field, and the idea of mounting the diaphragm with its coil in a sound box which is mounted on the top plate or outer pole of this dynamic speaker, the coil being arranged in the air gap to be freely movable. By this construction we are able to obtain a very efficient instrument. We always used an exceedingly narrow air gap so there was only two or three thousandths of an inch clearance between the coil and the pole pieces. In order to put that coil into the concentric magnetic field correctly after the pole pieces were spaced to maintain a true concentric air gap, it was necessary to so mount the diaphragm and the coil on one of those pole pieces so that the coil would move axially in the air gap with no danger of hitting either pole piece. I might say in this respect that the movable

(Testimony of Edwin S. Pridham.)

coil moves a considerable distance, from one-quarter to one-half inch in many types of instruments. When we consider that the longitudinal movement of the coil is from one-quarter to one-half inch, or .250 to .500 of an inch, and the clearance between the walls of the coil and the pole pieces is only .002 or .003 of an inch, it will be immediately [78] manifest that exceedingly great care in an instrument like this must be taken to prevent any rubbing of the coil on the pole pieces. We made these instruments in large quantity and with great success following the outlines of this patent.

Q. When you refer to a dynamic speaker, what do you mean?

A. We have always referred to a dynamic speaker as a moving coil speaker, as differentiated from a magnetic speaker. By a moving-coil speaker I mean a speaker the coil in which is attached to the telephonic circuit, is disposed to be freely movable in an intense magnetic field, so that the motion of the coil is a longitudinal motion in the air gap, that is, the coil does not approach to or recede from the pole pieces as is the case in a magnetic speaker.

Q. With respect to a dynamic and a magnetic, how do those differences manifest themselves in the matter of efficiency?

A. The dynamic speaker is a much more efficient speaker than the magnetic speaker in acoustic reproduction for this reason: It is a well-known fact

(Testimony of Edwin S. Pridham.)

in all magnetically-operated armatures that the force on the armature increases inversely as the square of the distance——

The COURT: Is there any contention upon that point, Mr. Miller?

Mr. MILLER: No, your Honor.

Mr. LOFTUS: I didn't know. I merely wanted him to explain what a dynamic speaker was in comparison to what is referred to in the depositions as a magnetic speaker.

A. In a dynamic speaker, the force is a one-to-one ratio, and moves in toward the poles or away from them, but not on the concentric air gap, which is formed by the magnetic poles. [79]

Mr. LOFTUS: Q. Now, turn to the drawing that has been marked Plf's. Ex. 1, namely, a cross-section of the Atwater Kent loudspeaker, and point out wherein you find, if at all, any or all of the elements of Claim 8 of the first patent in suit, to-wit, Plf's. Ex. 5.

A. In the cross section of the Atwater Kent loudspeaker, Plf's. Ex. 1, we find a sound-box H, with its diaphragm G, a vibrating conducting coil for telephony currents represented as J disposed in a magnetic field and rigidly secured to the diaphragm G, and connections between said coil and the operating circuit. These connections are represented by K and K', as a conducting strip secured to the diaphragm G.

Q. Will you make that same comparison, please,

(Testimony of Edwin S. Pridham.)

with reference to Plf's. Ex. 2, that is, a cross-section of the Stromberg-Carlson loudspeaker?

A. In the Stromberg-Carlson loudspeaker, Plf's. Ex. 2, we find a receiver for telephony, a combination for a sound-box which is represented by H, and a magnetic field represented by A, a vibrating conducting coil for telephone currents represented by J. This conducting coil is rigidly connected to the diaphragm G; and connections between the coil and the operating circuit comprising thin metallic strips secured to the diaphragm. These thin metallic strips lead from the vibrating coil to a point M on the diaphragm G; from this point on M on the diaphragm G the operating wire K' is led out to a terminal which leads to the operating circuit. These metallic strips and operating circuit wires are firmly secured to the diaphragm at the point M.

Q. Now turn to the second patent in suit, particularly with reference to Claims 8, 9, and 10, and point out wherein, if at all, you find any or all of the elements of those three claims present in the device illustrated in Plf's Ex. No. 1, Atwater Kent [80] loudspeaker.

A. As regards claim 8 of patent 1,448,279, reading the structure of the Atwater Kent loudspeaker, we have an electro-dynamic receiver comprising a shell or casing; the shell or casing in the Atwater Kent speaker is designated A. It is formed of magnetizable material; a magnetizing coil within the casing. The magnetizing coil is C, a core for

(Testimony of Edwin S. Pridham.)

the coil extending from the bottom of the casing to the top thereof. This core is represented by D, and formed at its upper end by an inner pole piece F, an outer pole piece in the form of a flat plate arranged upon the casing; the flat plate is A' in the Atwater Kent drawing. This flat plate is arranged upon the casing and has a central opening surrounding the inner pole piece and spaced evenly therefrom; means within the casing for maintaining the pole pieces in spaced relation. These means are represented by the magnetic structure. The insulating base had absolutely nothing to do with the operation of the instrument, it was just a support for the instrument.

Claim 10 reads exactly the same way on the structure of the Atwater Kent loudspeaker.

Q. Now, turn to Plf's. Ex. 2, a drawing of the Stromberg-Carlson loudspeaker, and point out wherein, if at all, you find the elements of Claims 8, 9 and 10 of the second patent in suit?

A. Reading Claim 8 upon the diagram of the Stromberg-Carlson loudspeaker, we have an electrodynamic receiver comprising a shell or casing having bottom and side walls formed of magnetizable material; that casing, with its bottom, is A and A². A magnetizing coil within the casing, represented by C. A core for the coil represented by D extending from the bottom of the casing to the top thereof, and formed at the top with an inner pole piece represented by the letter F in the drawing, an outer [81]

(Testimony of Edwin S. Pridham.)

pole piece in the form of a flat plate arranged upon the casing and having a central opening surrounding the inner pole piece, and spaced evenly therefrom. That top plate is represented by A' in the drawing. Means within the casing for maintaining said pole pieces in spaced relation. The means in the Stromberg-Carlson loudspeaker is represented by the letter E in the drawing. It consists of a brass collar which is attached to the top plate and closely surrounds the pole D in order to space the inner pole from the outer pole; a sound-box H is carried by the casing, said sound-box including a diaphragm G and a movable coil J rigidly connected to the diaphragm G and arranged within the space between the two pole pieces.

Claim 9 reads upon this structure in exactly the same way, with the exception that the insulating base is not shown.

Claim 10 also reads upon the drawing in exactly the same way.

The COURT: Q. I take it, then, that there is very little, if any, difference between Claims 8, 9, and 10 of patent 1,448,279?

A. There is very little difference, your Honor. There is a little bit of difference in the wording. For instance, in Claim 10, it says: "An electrodynamic receiver comprising a shell or casing having bottom and side walls formed of magnetizable material, a magnetizing coil within the casing, a core for said coil having contact at its lower end with the bottom

(Testimony of Edwin S. Pridham.)

of the casing, an extension on the upper end of the core forming an inner pole piece, an outer pole piece in the form of a plate removably mounted on the casing, said outer pole piece having an opening spaced circumferentially from the inner pole piece, means within the casing for retaining the pole pieces in spaced relation, a sound-box [82] arranged upon the outer pole piece and supported thereon, said sound box including a diaphragm and an annular coil rigidly connected to the diaphragm and arranged within the space between the two pole pieces." In the other one the sound-box is carried by the casing. They are practically the same in their wording except just for a little different use of English.

Cross-Examination by Mr. Miller.

Q. Please look at Claim 8 of the first patent, 1,266,988, and specify for me the mechanical elements that are mentioned in that claim. You may number them for convenience.

A. The mechanical elements named in the claim are a receiver for telephony. That is the general subject of the claim. In a receiver for telephony the combination with a sound-box—1—and its diaphragm—2; a magnetic field—3; a vibrating conducting coil for the telephonic currents—4—disposed in the field and rigidly secured to the diaphragm; and connections—5—between said coil and the operating circuit comprising thin metallic strips secured to the diaphragm—6.

(Testimony of Edwin S. Pridham.)

Q. Now, taking up the first element which you named, the sound-box, please point out in the drawings of the patent the illustration of the sound-box referred to.

A. In the drawings of the patent the sound-box is represented in Fig. 7 by the two rings which are numbered 25, which are supported upon the pole pieces numbered 12, 12.

Q. What is the form of that sound-box shown there?

A. The form of the sound-box consists of a bottom peripheral ring which is mounted by the two posts shown on the pole pieces; the top ring, which is also 25, is a peripheral ring with a cover which clamps the diaphragm between the two rings, the diaphragm in this [83] case being represented by 23. Fig. 10 shows a very good cross section of that diaphragm and sound-box.

Q. In Fig. 10 what does the numeral 26 represent?

A. 26 represents the ferrule for a horn or other listening devices.

Q. That is, a horn is supposed to be attached there when the thing is used, is it?

A. It was in this particular instance, yes.

Q. What do you consider to be the dominant element in Claim 8 which gives it patentability?

Mr. LOFTUS: I object to that, your Honor, because it is a combination claim, and you have to consider the thing in its entirety. I do not know

(Testimony of Edwin S. Pridham.)

that it is possible for any witness to pick out what the dominant element is. Furthermore, that is a matter for the Court to decide.

The COURT: I think that is so, Mr. Miller.

Mr. MILLER: In every combination there is always some dominant feature which differentiates it from the prior art. That is what I was trying to get at. I can get at it in another way.

The COURT: I will overrule the objection. You may answer.

A. I would say in this particular claim what I really think to be the prime consideration, you might say, in building a device of this kind, is to attach the fine wires of the moving coil to a stationary support on the diaphragm and then attach the operating circuit wire to that place, so the fine wire of the moving coil cannot be broken. Does that answer your question, Mr. Miller?

Mr. MILLER: Q. Yes. I presume, then, that would mean the last element specified in the claim, as follows: "And connections between said coil and the operating circuit comprising thin [84] metallic strips secured to the diaphragm." Is that the element you had in mind?

A. No, I would not say so, because in that case you do not consider the wires of the movable coil. The prime requisite, as I said before, is to be able to attach the fine wire of the movable coil to the leads which will not break when they are vibrated. In the combination there is this, if I may state it:

(Testimony of Edwin S. Pridham.)

The connections between the coil and the operating circuit comprising thin metallic strips secured to the diaphragm in this regard, that the wire of the movable coil is attached to the diaphragm and also these thin metallic conduction strips are attached to the diaphragm.

Q. The claim does not describe that arrangement, as I read it, but simply specifies the thin metallic strips secured by the diaphragm; isn't that so?

A. No, it does not. It says: "In a receiver for telephony the combination with a sound-box and its diaphragm, of a magnetic field, a vibrating conducting coil for the telephonic currents disposed in said field, and rigidly secured to the diaphragm."

Q. I want to find out, if I can, what this claim means. The only way I can do that is to read the words of the claim and then ask you about them. I find in the claim these words: "And connections between said coil and the operating circuit comprising thin metallic strips secured to the diaphragm." That is true, is it not, as far as that claim is concerned?

A. Yes.

Q. Point out to me in the drawing those thin metallic strips.

A. The thin metallic strips which are secured to the diaphragm are clearly shown in Fig. 10 of the patent. They are numbered 27 in this particular drawing. They are attached to the thin wire of the movable coil very close to the center of the dia-

(Testimony of Edwin S. Pridham.)

phragm. They lead out to the operating binding post which is [85] numbered 29 in that drawing. The thin metallic strip which is represented by 27 is not the same wire that the coil is wound with. It is a flexible wire. The coil is wound with a thin No. 35 or 36 Brown & Sharp gage wire. It is shown there as a flat metallic strip or ribbon, marked 27 and it extends out very nearly to the periphery of the diaphragm. It is attached at the center of the diaphragm, on the under side. There is a distinct air space shown between the diaphragm and the metallic strip, which is bent as shown by the shading in Fig. 9.

In Fig. 9 the strips are secured to the diaphragm contacting with the fine wires of the coil at a point represented at about 24. They are led out across the diaphragm. In the case of Fig. 9, they are attached to the diaphragm about half way out and then are bent down and are connected to the operating binding posts which may be represented by 29 in that drawing.

Q. I have an enlarged reproduction of Fig. 9; just compare that and see if that is correct.

A. Yes, that is correct.

Q. I understand that before you got up this device with these flat mechanical strips you used just the conventional round wire?

A. No, we used the wire the core was wound with and we led that right onto a circuit.

Q. What was the size of that wire?

(Testimony of Edwin S. Pridham.)

A. About 35 or 36. That would crystallize by the vibration, that is, bending back and forth, because the coil vibrates very rapidly and, of course, one end being anchored and the other end moving, the coil would crystallize.

Q. And when you supplied the wire in flat metallic strips, that difficulty was obviated?

A. Yes, but it was not obviated by simply using the flat metallic strips. That is not the essence of the invention, at all.

Q. I am just taking the wording of the claim, itself. That is the only thing I can go by. If you have some secret idea in your own mind that is not expressed in that Claim I am [86] not concerned with that.

A. No, I have not.

Q. Here is a model of the Atwater Kent machine, Plf's. Ex. 4; will you please point out in this model the flat metallic strips referred to in their claim?

A. These are the thin metallic strips secured to the diaphragm. This is a flexible wire. That is not the wire that the movable coil is wound with. The wire that the movable coil is wound with is a very thin 35 or 36 wire, a round solid wire. You can see that down in the center, there, it is attached to the coil. This wire that appears underneath the paste there is the thin metallic strip.

Q. A round wire?

A. Yes, but it is a thin metallic strip, isn't it?

(Testimony of Edwin S. Pridham.)

Q. This device that is pasted down onto the diaphragm by means of some paste there is in form a round wire, is it not?

A. A round flexible wire, yes.

Q. I understand your position to be that as shown in this model, Plf's. Ex. 4, that round wire that appears there pasted onto the diaphragm is the element called for by this claim 8?

A. Yes, that is correct.

Q. And that is your position in this case, is it?

A. That is my position, yes.

Q. Now, taking up the second patent in suit, 1,488,279, will you please catalog for me for the purpose of convenience the elements of that claim.

A. An electrodynamic receiver comprising a shell or casing—we will call that shell or casing No. 1; a magnetizing coil within the casing—we will call that No. 2.

Q. Are you reading from Claim 8?

A. Claim 8 and referring to Fig. 2. An electrodynamic receiver comprising a [87] shell or casing having bottom and side walls—

Q. The shell or casing was No. 1?

A. Yes.

Q. Now No. 2.

A. A magnetizing coil within said casing. We will call that No. 2. A core for the coil extending from the bottom of the casing to the top thereof; we will call that No. 3. And formed at its upper end with an inner pole piece—No. 4, an outer pole

(Testimony of Edwin S. Pridham.)

piece appears in the form of a flat plate—No. 5—arranged upon the casing, and having a central opening surrounding the inner pole piece and spaced evenly therefrom; means within the casing for retaining said pole pieces in spaced relation—No. 6; a sound-box, No. 7; said sound-box including a diaphragm—No. 8—and a movable coil, No. 9, rigidly connected to the diaphragm and arranged within the space between the two poles.

Mr. MILLER: Q. Now, looking at the drawings of the patent, what is the shell or casing having a bottom and side walls formed of a magnetizing casing designated what?

A. No. 14 in the drawing Fig. 2.

Q. That is simply the pot which contains a magnet?

A. That is correct.

Q. And these magnets have the technical name of pot-shaped magnets, haven't they?

A. They are so-called in the trade.

Q. The second element you gave was a magnetizing coil within said casing. What is that designated by?

A. That is designated by the figure 16 in drawing 2.

Q. That is just simply the winding on the magnet?

A. That is the winding on the magnet, yes.

Q. A core for the coil, extending from the bottom of the casing to the top thereof and formed at its

(Testimony of Edwin S. Pridham.)

upper end with an [88] inner pole piece: What is that designated as?

A. That is No. 17, the core formed at its upper end with an inner pole piece, No. 12.

Q. That inner pole piece 12 is not integral with the core 17, is it?

A. In this particular drawing it is not.

Mr. MILLER: Q. How is that inner pole piece 12 formed or constructed?

A. The inner pole piece is formed by a short piece of magnetic material which when in place is in intimate contact with the central pole 17.

Q. I will read to you from line 86, page 1, of the specifications: "The iron core 17 of the magnetizing coil 16 is bored out to form a seat for the pole piece 12 so as to make a good magnetic contact." That is correct, is it?

A. That is correct as referring to Fig. 2.

Q. That Fig. 2 is attached in some way to the receiver head so that when the receiver head is removed it will go with the receiver head, will it not?

A. That is correct.

Q. I show you a reproduction of your drawing but arranged in a little different way. In this drawing I have removed the receiver head from the magnetizing structure, as the patent says it can be done. This drawing that I show you will represent that, will it?

A. This drawing appears to be correct as regards Fig. 2 of the patent, with the top plate and

(Testimony of Edwin S. Pridham.)

small core 12 attached in the spacing ring or held in the spacing ring.

Q. I show you another one of these drawings, which I have colored up so as to make it more striking.

A. Yes, that is correct as regards Fig. 2.

Q. You do not find in the Atwater Kent structure the movable inner pole piece 12 which is detachable from the core here, do you?

A. I do not find any short piece in the Atwater [89] Kent so it can be removed as a unit, no.

Q. In the Atwater Kent the core of the magnet which extends all the way from the bottom to the top is all in one piece, is it not?

A. Yes, that is correct. In the Atwater Kent drawing here the core D which is held in the space ring E could be removed by removing the screw at the bottom and pulling it out. What you are asking me is if this small pole piece marked F at the top of the Atwater Kent, if that comes off the part marked D?

Q. Yes.

A. No, it does not.

Q. Is there any advantage in having that detachable pole piece 12 which is shown in your patent?

A. Sometimes there is, sometimes there is not in manufacturing. It all depends upon the way it is manufactured. We made a great many instruments like it, and we made thousands without the pole tip removable like that.

(Testimony of Edwin S. Pridham.)

Q. You do not use the removable pole of that type now, do you?

A. Yes, we do in many instances; we use them in electrodynamic speakers in marine telephone work.

Q. What is the object in removing that?

A. If the magnetic structure becomes very small, like in the present structures, it may be only an inch or two long, that pole piece is removed [90] right with the head; in the old type, where you had a very long piece, for instance, six inches, it was necessary to bore out the long magnetic pole and insert a small one.

Q. That magnetic piece, then, is of some convenience, is it, in some instances?

A. Oh, yes, indeed, it is.

Q. Will you please point out in the drawing of the Atwater Kent machine which you have there what you call the sound-box and diaphragm?

A. In the drawing of the Atwater Kent loud-speaker the sound-box H and the diaphragm G is what I term the sound-box and diaphragm.

Q. And that is represented in the model by this framework?

A. By this framework and the diaphragm with the supporting rings which hold it in place.

Q. In other words, this cover which we find here, this cover or framework which we find here is the mechanical equivalent, as you understand it, of the sound-box shown specifically in your pattern?

A. Yes.

(Testimony of Edwin S. Pridham.)

Q. Of course, the Atwater Kent does not show the form of sound-box shown in your patent?

A. No.

Q. It does not show a box-like structure?

A. It shows supporting means for the diaphragm with a cover on the front.

Q. In your patent you have a box-like structure, have you not?

A. There is nothing in the back of it; it is completely open in the back. There is a front on the supporting ring which will take a horn.

Q. Now tell me about that horn. Why do you want to use a horn?

A. You want to use a horn so you can use a loud-speaker in the old days. When the diaphragm vibrated it was necessary to place the air of the room above atmospheric pressure and to direct the sound through a trumpet or a horn. [91]

Q. When you were exploiting your first patent, that is, selling the devices, and I am referring to patent 1,266,988, you used a horn with it, did you?

A. Yes, we did.

Q. Up to what time did you use the horn?

A. With that particular instrument?

Q. Yes.

A. Until about 1920. I imagine.

Q. After you discarded the horn or discontinued the horn, what did you supply in its place?

A. After we discarded the horn on that particular instrument, we did not make that mechanical form of instrument except as regards Claim 8 of the

(Testimony of Edwin S. Pridham.)

patent, the leadout strips of wire. We did not make the mechanical form of the instrument after 1920.

Q. What did you make after 1920?

A. We made after 1920 the device as exemplified in the next patent, to wit, 1,488,279, which shows a ferrule on the sound-box on which we placed a horn at that time.

Q. How long did you use that device with the horn?

A. We use it still. That device is still used and quite a number are sold at the present time with the horns, exponential horns, as they call them, for talking motion picture work.

Q. That is for some particular use, is it not, and not for general use?

A. It is for commercial use with motion picture houses. We sell them and get money for them. There is quite a trade in that particular type of instrument.

Q. In your commercial style of device you do not use that now, do you?

A. We sell them in commerce and bill the customer for them and get money for them. That is commercial, isn't it? Do you mean—I don't know what you mean, Mr. Miller?

The COURT: Q. What is your principal business?

A. The principal business is selling these loudspeakers to radio concerns [92] that do not use

(Testimony of Edwin S. Pridham.)

a horn. That is our principal business. However, we sell quite a number of horns.

Mr. MILLER: Q. With that business, then, your principal loudspeaker business, you do not have horns any longer?

A. That is correct. I just wanted to make it clear that the horn is not obsolete in commercial work; that is not true.

Q. I am going to show a device and ask you if you recognize it.

A. I do recognize it very well. I imagine it is a Magnavox loudspeaker made from 1920 to 1922. It is a very old type one. I would say that that particular instrument was made under the 1,266,988 patent. We made that from 1922, say, or 1921, to 1928 or 1929. We may be making some like that right now for export purposes.

(Mr. MILLER: I would like to have it marked Defs'. Ex. A for identification.)

Q. Now, I show you another loudspeaker and ask you if you recognize that.

A. That is a modern type of Magnavox loudspeaker made by the Magnavox Company. It has the nameplate of the Magnavox Company on it. We commenced to manufacture the cone type of loudspeaker in the fall of 1926 and the spring of 1927 and we have been selling them ever since.

Q. Where is the sound-box in this device that we have just been referring to?

A. The sound-box, as I have mentioned, is the

(Testimony of Edwin S. Pridham.)

cone housing with the peripheral supporting rings and the diaphragm. There is a ring underneath here which holds the periphery of the diaphragm in place. It consists of the housing and the diaphragm.

Q. Substantially the same in mechanical construction, though a little different in form, as the cone housing in the [93] Atwater Kent?

A. Yes, very similar.

Q. What kind of a diaphragm do you have in this device?

A. That is a cone-shaped diaphragm, well-known in the art.

Q. How long has it been well-known in the art?

A. Since 1907, I imagine.

Q. It is made of paper, is it not, or some material of that kind?

A. Yes, made of a peculiar impregnated paper, rubber impregnated paper called Lexide, I believe.

Q. You have discontinued using that metallic diaphragm and substituted for it this paper cone, have you not?

A. We have [94] not discontinued using the metallic diaphragm, because we still sell some of those metallic diaphragm instruments for use with horns. The greater majority of them, however, are made with the paper cone diaphragm.

Q. The principal part of your commercial business for radio loudspeakers is such as is shown by the paper diaphragm and cone support?

(Testimony of Edwin S. Pridham.)

A. Yes, that is correct.

Q. You have sold large quantities of these, have you?

A. Yes.

Q. And you say you commenced selling them in about 1926 or 1927?

A. The fall of 1926 and the spring of 1927. I think any commercial quantities began with the spring of 1927.

Q. Do you find this paper cone more advantageous than the circular metal diaphragm that you used before?

A. No, not at all. The circular metal diaphragm is, if anything, superior to the cone when used with the proper horn.

Q. You do not use this device with a horn, at all, do you?

A. Yes, we sell a great many of those with horns.

Q. I understand, then, that you discarded the superior device, consisting of the circular metal diaphragm, and began to use the inferior device—that is, not as superior as the diaphragm—consisting of a paper cone? Do you want to appear that way in Court?

A. I would like to appear that way in Court, yes, indeed, with this interpretation as regards inferior and superior, that is, that it depends upon the use to which you put it. If you put an instrument to use in talking motion pictures you use a light metallic diaphragm with an exponential horn.

(Testimony of Edwin S. Pridham.)

Very large quantities of those are sold today. If you want to have a much cheaper instrument which will fit in in homes and be readily adapted to a radio cabinet, you use a cone loudspeaker, because the expense is very much less and the convenience to the users is [95] very much greater. However, so far as the efficiency of the loudspeaker goes, there is nothing so far that will equal the thin metallic diaphragm with the exponential horn. That is proved by the very large quantities that are sold today by the Western Electric, the Radio Corporation, and by those large companies. I just wanted to bring that out to show you that it is not a question of inferiority or of superiority, it depends upon the place you wish to use it.

Q. Where did you get the idea of using this paper cone and this cone support that is shown in this device?

A. We were making for many years cone magnetic speakers, and we simply adopted the dynamic drive to the paper cone, which we were using in magnetic speakers to the dynamic speakers.

Q. When did you first use anything in magnetic speakers?

A. We used cones in magnetic speakers in 1923, 1924, and 1925, and along there; from 1923 to 1925 and forward we used cones in magnetic speakers.

(Mr. MILLER: I ask that this be marked Defs' Ex B for identification.)

Q. You spoke something of an exponential horn.

(Testimony of Edwin S. Pridham.)

Will you please tell me what that is, and give me the dimensions of it?

A. An exponential horn may have any dimensions whatsoever. It relates entirely to the ratio of the opening at the end of the horn to the taper of the horn. In most exponential horns, for instance, where you want to obtain very efficient response, the opening at the outer end is rather large; it may be two or three feet in diameter. It must have a very slight taper. It follows what we call the exponential formula in mathematics; it is the ratio of the taper or incline of the horn between the apex of the horn and the mouth of the horn. It has been proven to be the [96] correct type of horn to use to reproduce in all clarity the different frequencies in sounds, from the lowest bass to the highest treble.

Q. What are the exponential horns used for?

A. The exponential horns have been used for the radio. A great many of them were sold in 1928. Another name for them is air column horns. They are still on the market today. Westinghouse puts out an exponential horn. Crosley puts out an exponential horn.

Q. What are the dimensions of the average exponential horn used today?

A. About six feet long, I imagine, and maybe a foot and a half to two feet in diameter. They are used in the new type of radios which are coming into very great use in the form of grandfather

(Testimony of Edwin S. Pridham.)

clocks. The radio instrument is up near the clock, and the horn goes down through the grandfather clock base. It produces very fine results that way.

Q. In discussing the claims of your patent 1,448,279, when referring to claims 8, 9, and 10, you said that it was very essential to the correct operation of such a device that there should be a narrow air gap, did you?

A. Yes.

Q. Please point out in the specification anything in the patent there is in regard to a narrow air gap, anything that the patent says in regard to a narrow air gap.

A. Reading from page 1, line 94: "We have found that the greater the density of magnetic flux in the air gap, the greater the efficiency of the instrument. Therefore, the instrument must be designed so as to utilize to the highest degree the magnetic flux of the magnetic structure. For this reason it will be apparent that the cross section of the air gap must not be greater than the cross section of the central pole. Thus the depth of the air gap for maximum efficiency can not be more than one quarter of the diameter of the center pole, [97] as the area of the cylinder equals the cross section of the cylinder when the altitude of the cylinder is equal to one-fourth its diameter".

Q. Is that the only part of the specification that refers to a narrow air gap?

A. I think there is another part here; I will look it over. I am reading from line 18, page 2: "We have made certain mechanical improvements in the receiver which have aided greatly in the construction of the instrument. As mentioned above, the

(Testimony of Edwin S. Pridham.)

flux density should be as great as possible, so for this reason the width of the air gap should be kept a minimum just sufficient to admit the moving annular coil with a few thousandths of an inch clearance on either side.”

That certainly means a narrow air gap.

The COURT: Q. What are you reading from?

A. From page 2, starting line 18 of the specification: “As mentioned above, the flux density should be as great as possible, so for this reason the width of the air gap should be kept a minimum just sufficient to admit the moving annular coil with a few thousandths of an inch clearance on either side.” That certainly refers to a narrow air gap.

Mr. MILLER: Q. You have now pointed out all the parts of the specifications referring to the question under discussion, have you?

A. I am not sure, because I think all the way through it mentions that. I think that is sufficient, though, to point it out. I can not find anything else in there.

Q. As I understand you, you said that the only difference between Claim 8 and Claim 9 of this patent resides in the fact that Claim 9, in addition to the element called for by Claim 8, also calls for a base of insulating material; is that true?

A. There must be other differences or the Patent Office would not have [98] allowed any differentiation. You simply could not repeat a claim and get it allowed. I am sure there are specific differences.

(Testimony of Edwin S. Pridham.)

Q. In other words, in Claim 9 the electrical device or whatever it is is placed on a base of wood to hold it?

A. That is correct, anything to hold the instrument. The base has nothing to do with the technical operation of the instrument. It is simply as if you placed this receiver on this desk, the desk would have nothing to do with the operation of it.

Q. You said you thought that Claim 10 was practically the same as the other claims, that is, Claims 9 and 8, except for a little change in phraseology; that is your idea of the claim, is it?

A. Yes.

Q. So that Claim 8 would practically cover all that you wanted as an effective implement and Claims 9 and 10 might just as well have been left out?

A. Well, I am not so sure that they might just as well have been left out, but I will say this, that Claim 8 covers the elements of the instrument very well.

Mr. MILLER: That is all.

Mr. LOFTUS: I have here, your Honor, a photostat of the assignment from the Commercial Wireless & Development Company to the plaintiff, the Magnavox Company.

Mr. MILLER: It appears by the document just handed to me by counsel that on August 17, 1917, the Commercial Wireless & [99] Development Company by its proper officers assigned to the Magnavox Company, the plaintiff herein, the invention

(Testimony of Edwin S. Pridham.)

described in patent No. 1,266,988, and that the Magnavox Company is still the owner of that patent. I am willing to concede that, your Honor, so as to save the necessity of putting this document in evidence.

Redirect Examination by Mr. Loftus.

Q. In your cross-examination, Mr. Pridham, in analyzing the elements of Claim 8 of Patent No. 1,488,279, you applied No. 4 to that portion of the claim reading "And formed at its upper end with an inner pole piece"; did you intend by that that that was to be considered as a separate element in itself?

Mr. MILLER: I object to that question, your Honor, that is calling for an opinion, what his intent was.

Mr. LOFTUS: It is merely to explain his answer.

The COURT: Objection overruled.

A. In reading over Claim 8 it will be noticed that it contains "a core for the coil extending from the bottom of the casing to the top thereof, and formed at its upper end with an inner pole piece." That was to distinguish from the other claim, 10, in which it says, "A core for the said coil having contact at its lower end with the bottom of the casing and an extension on the upper end of the core forming an inner pole piece." In one case the core is formed with the inner pole piece as an integral part of the core. In the second

(Testimony of Edwin S. Pridham.)

case there is an extension on the upper end of the core which forms the inner pole piece.

The COURT: Q. Do you wish to make any change in the elements you mentioned?

A. Yes, I would like to make this change: In my original testimony I called that inner pole piece 4 and I would [100] like to change it to 3^a.

Q. Now you are referring to patent 1,448,279?

A. Yes, your Honor, and to the eighth claim.

Q. And you want to call that 3^a?

A. Yes, instead of 4.

Mr. LOFTUS: Q. Now, in regard to the element in Claim 9, namely, a base of insulating material, is that shown in the drawing of the patent, and if so, point it out?

A. It is shown in the drawing of the patent, Fig. 2, as the cross hatched black area at the bottom of the magnetic casing.

Mr. LOFTUS: That is all. [101]

The COURT: Mr. Loftus suggests that he might withdraw claims 9 and 10. Is that correct?

Mr. LOFTUS: Yes. There is no reason why we should stand on them. I think our rights are covered by Claim 8.

The COURT: Then it is understood that Claims 9 and 10 are withdrawn?

Mr. MILLER: Very well.

Mr. LOFTUS: That is true.

Mr. MILLER: I offer in evidence Defs' Ex. B for identification. I offer in evidence:

As Defs'. Ex. C, Bell Patent 186,787, Jan. 30, 1877;

(Testimony of Edwin S. Pridham.)

As Defs'. Ex. D, Siemens Patent 149,797, Apr. 14, 1874;

As Defs'. Ex. E, British Patent to Siemens, 4685, of 1877;

As Defs'. Ex. F, Cuttriss and Redding Patent 242,816, of June 14, 1881;

As Defs'. Ex. G, Cuttriss and Milliken Patent 256,795, Apr. 18, 1882;

As Defs'. Ex. H, Milliken Patent 262,811, Aug. 15, 1882;

As Defs'. Ex. I, Mather Patent 387,310, August 7, 1888:

As Defs'. Ex. J, a patent issued to Sir Oliver Lodge, No. 9,712, of April 27, 1898;

I offer in evidence as Defs'. Ex. K, a copy of a printed publication entitled "The Electrician," of Jan. 6, 1899, being pages 366 and 367. I will produce an enlargement of that figure, made in colors, and ask to have that marked "Defs'. Ex. L."

Mr. LOFTUS: I might as well object to that at this time, your Honor, because it is not a true enlargement. There is a lot of handwork on there.

Mr. MILLER: I am going to explain that.

The COURT: Then let it go in as a part of your argument. Exhibit L goes in then as part of your argument. Let it be so marked.

Mr. MILLER: I will next offer in evidence, as Defs'. Ex. M, an uncolored enlargement of that Fig. 5. [102]

Mr. LOFTUS: There is no objection to that. We

(Testimony of Edwin S. Pridham.)

have had that before in all of the cases. That is a mechanical enlargement.

Mr. MILLER: I will offer as Defs'. Ex. N, a publication from "Electrical Engineer," Vol. 27, No. 565, pages 246 and 247.

I next offer in evidence:

As Defs'. Ex. O, Pearson Patent 903,745, Nov. 10, 1908;

As Defs'. Ex. P, Pollak Patent 939,625, Nov. 9, 1909;

As Defs'. Ex. Q, French Patent to Oliver, 404,286, of Nov. 27, 1909;

As Defs'. Ex. R, British Patent to Oliver, 12,857, of 1909;

As Defs'. Ex. S, Oliver Patent 951,695, of March 8, 1910;

As Defs'. Ex. T, Johnsen Patent 1,075,786;

As Defs'. Ex. U, Hopkins Patent 1,271,529, July 2, 1918;

I next offer in evidence Patent 1,847,935, to Far-rand, application filed April 23, 1921 and patent issued March 1, 1932.

Mr. LOFTUS: We object to that, your Honor, because it is not set up in the Answer, and no notice was given; also because it is much later than either of the patents in suit.

Mr. MILLER: It does not have to be set up in the Answer, because I am not using it for anticipation. So that objection will have to go out.

Mr. LOFTUS: Then why offer it? I think the objection is good.

(Testimony of Edwin S. Pridham.)

The COURT: Yes, I think the objection is good.

Mr. MILLER: I will withdraw that offer for the time being, until I read the deposition of Mr. Farrand.

I offer in evidence the French Patent to Ragonot, No. 570,746.

Mr. LOFTUS: The same objection applies to that, your [103] Honor. You will note the patent bears date of 1924, which is later than either of the patents in suit here. There has been no notice given with respect to this particular patent.

Mr. MILLER: I am offering it for the purpose of showing there is a difference between a cone device and a sound-box device. That is the purpose for which I am offering it; that they are two different things, and therefore they cannot be equivalents.

Mr. LOFTUS: It is a mere argument, your Honor.

The COURT: Yes, it is mere argument, Mr. Miller. The objection is sustained.

Mr. MILLER: I note an exception.

The COURT: I don't know whether it has been stated that the patent was issued May 6, 1924? I want the record to show it.

Mr. MILLER: I offer in evidence:

As Defs'. Ex. V, the British patent to Edison, No. 2909, of 1877;

As Defs'. Ex. W, the American patent to Edison, No. 203,015, of April 30, 1878;

(Testimony of Edwin S. Pridham.)

As Defs'. Ex. X, Rogers Patent 297,168, Apr. 22, 1884;

As Defs'. Ex. Y, Richards Patent 521,220, June 12, 1894;

As Defs'. Ex. Z, Shreeve Patent 602,174, Apr. 12, 1898.

I will now call Judge Fouts to the stand. [104]

TESTIMONY OF SAMUEL E. FOUTS,

a witness on behalf of Defendant.

Mr. MILLER: Q. Please state your qualifications, Judge Fouts, in patent mechanical matters.

The COURT: I suppose they will be admitted?

Mr. LOFTUS: I will concede that Mr. Fouts was an Examiner in the Patent Office. That is all I know about his qualifications.

Mr. MILLER: He was the presiding judge in the Patent Office which passed on appeal matters.

Mr. LOFTUS: They have no judges in the Patent Office, as I understand it. They are all examiners.

The COURT: All right, proceed.

Mr. MILLER: Q. Have you made a study of this art as it refers to the claims in question?

A. I have. Your Honor, I think Mr. Loftus made the remark that, as far as he knew, there are no judges in the patent office, that they are all examiners. I think that that ought to be cleared up.

(Testimony of Samuel E. Fouts.)

The COURT: What is it you wish to say in reply to that suggestion?

A. We have in the Patent Office what is known as an examining corps, which is made up of a large body of examiners of various grades. They do the examining work. If the examiners refuse to allow patents, and also in cases of interference, these matters may be appealed from the examiner to the board, which is called a Board of Examiners in Chief, which is analogous to a court, and I was a member of that Board of Appeals for practically ten years. They are not considered examiners, they are an appellate board.

Mr. MILLER: Q. Please look at the patent to Alexander Graham Bell, which is Defs' Ex. C, and just state briefly what there is in that patent shown relevant to any point here in issue. I don't want you to go over the patent. I want you to be very [105] brief and just point out those things.

A. That patent shows the early type of telephone receiver. It comprises a sound box, with a diaphragm, which is clamped about its edges in the sound box, and is set in vibration by electric currents which pass around the magnet F through the coil G. The vibration of the diaphragm sets up waves of compression in the sound box which pass out through the tube E to the listener. or it can be used as a transmitter by talking into the tube E. The coil G is in the electric circuit leading off to the line wire shown in Fig. 4 of the patent.

(Testimony of Samuel E. Fouts.)

Any sound waves impressed upon the diaphragm in one instrument will cause pulsations in that electric circuit and will set up corresponding vibrations in the diaphragm of another instrument on the same line.

Q. Please look at Defs' Ex. D, which is a patent to Siemens, No. 149,797, of April 14, 1874, and just state very briefly what there is shown in that patent that is relevant to any issue in this case?

A. The patent discloses what is called a magneto electric apparatus. It comprises a magnet which the patent says, near the bottom of the first column of the specifications, may be either a permanent or an electromagnet. One of the poles of the magnet is cylindrical. It is surrounded by the outer pole piece, leaving between these pole pieces a magnetic gap which is annular. I would like to direct attention to the fact that Mr. Siemens refers to this magnetic gap as a narrow space. He even goes so far as to state that it is a very narrow intervening space. You will find that in the second paragraph of the specifications. So within this very narrow intervening space Mr. Siemens mounts his annular dynamic coil, which I believe is shown by the small letter c. That coil is suspended on wires, A— [106]

A. I will try and be brief about it. Those wires, A, are vibrated by the coil as it moves up and down in this narrow air gap. In a way, they have the same movement that a diaphragm would have if the coil were attached to a diaphragm.

(Testimony of Samuel E. Fouts.)

Mr. MILLER: Q. Please refer to Siemens' British patent 4685, being Defs'. Ex. E in this case, and just briefly say what Figs. 5 and 6 are.

A. They show telephone structures. Take Fig. 5, there is a diaphragm to which is connected the annular coil which works up and down in the air gap between the inner and the outer pole pieces. The diaphragm is clamped about its edges in the sound box. Fig. 6 shows generally the same arrangement, except that instead of having the ordinary diaphragm as in Fig. 5, the annular coil is connected to what is referred to as a membrane of parchment or other material of trumpet form, to increase the effect of the sound pulses.

The COURT: Q. Is that mentioned in the specifications?

A. Yes, it is; on page 4, beginning with line 50. I might [107] call attention to the fact that in Fig. 6 the whole structure is encased in what appears to be a solid block of material there, so that it would be quite impossible, in such a structure, for there to be any displacement of one pole within the other. There are means shown there for maintaining the proper spacing of the pole pieces.

Mr. MILLER: Q. Now look at Exhibit F, patent to Cuttriss and Redding, No. 242,816, of June 14, 1881, and state briefly what you find in there illustrated as material to anything in this case.

A. That is also a telephone. It has the magnet with a cylindrical center pole piece surrounded by

(Testimony of Samuel E. Fouts.)

the outer pole piece, which is of annular form, and which is shown specifically in Fig. 3. That leaves an annular air gap between these two pole pieces and within that air gap vibrates the annular coil C, which is connected at the center of the diaphragm D. The diaphragm is clamped in the sound box F. Of course, the vibrating coil is connected to the stationary lining posts L and G through flexible connections which have pigtail twists in them so as to permit the vibration of the coil without great interference.

Q. Take Defs' Ex. G, patent to Cuttriss and Milliken, 256,795, and state briefly what you find there relative to any issue in this case.

A. I find in that patent a telephonic receiver which has the magnet with the poles arranged in the same manner as in the patent I have just discussed, so as to provide an annular air gap within which vibrates the annular coil I. In this case that coil is connected to a rather narrow plate A, which extends across the sound box. That plate is connected to the diaphragm proper, B, through a pair of wires which extend out, as shown in Fig. 3, and frictionally engage with a small aperture in the diaphragm B; so as the plate A vibrates it transmits its vibrations [108] to the diaphragm through the frictional connection shown in Fig. 3.

Q. Take Defs' Ex. H, patent to Milliken, 262,811, of August 15, 1882, and state briefly what you find there shown relative to any matter in this case?

(Testimony of Samuel E. Fouts.)

A. In the Milliken patent you have a magnetic structure which approximates the pot structure, that is, you have a series of horseshoe magnets having their north poles all brought together in a bundle in the middle, and the south poles arranged around this middle bundle in a circle. Then to hold all these poles in their proper position, Milliken uses this member *b*, which is some sort of insulating material, he calls it a block *b* of hard rubber or other suitable non-magnetic material. That is on page 1, line 61. So the poles are held in their proper positions, maintaining the annular air gap by this block of insulating material. The diaphragm is vibrated, of course, by the movement of the coil, and the diaphragm is clamped within the sound box.

Q. Take Defs' Ex. I, patent to Mather, 387,310, of August 7, 1888, and state briefly what there is shown in that patent relevant to anything here?

A. That is a device for producing a mechanical movement by electrodynamic means similar to those we have been talking about. In Fig. I there is the true pot member, having the inner core 2, and the outer walls forming a cylindrical vessel or chamber; within this chamber about the inner pole is wound the magnetizing coil 3. The cover of the pot forms the outer pole piece; it has a central aperture into which projects the upper end of the core 2, being spaced from it to form an annular air gap. The vibratory coil 6 works up and down in

(Testimony of Samuel E. Fouts.)

this air gap. In this particular disclosure it operates a sort of walking beam 8, which is pivoted on the support 9 on the outer [109] pole piece. There is a weight 11 hung from the outer end of this walking beam. Weight 11 merely represents the work or the load which the device is lifting up and letting down again.

Q. Do you find in this patent anything in the nature of a spacing ring or device?

A. Yes. The magnetizing coil 3 is wound upon a spool which is said to be of brass or some such material. The spool is made of such size as completely to span the space between the inner pole piece and the inner wall of the pot. That would hold the inner core centralized within the pot.

Q. Look at British patent to Lodge, 9712, of 1898, being Defs' Ex. J, and state briefly what you find in the Lodge patent relative to anything in this case?

A. Lodge shows a number of specific types of receivers. He was interested in what he refers to or has referred to as space telegraphy. This is akin to the modern radio. In Fig. 1 he shows a sounding board *d*, which is set in vibration by an electrodynamic coil which is lettered *a*, and which works in an annular gap between the pole pieces. Fig. 1 does not show that magnetic structure so very well, but it is shown in Figs. 2 and 3 and other of the figures. The center pole *c'* projects into an aperture in the outer pole so as to form

(Testimony of Samuel E. Fouts.)

an annular air space in which the annular coil *a* vibrates. On Fig. 1, as I have said, that movement of the coil operates the sound board *d*. In Fig. 2 it operates a sort of a microphone which is supported upon a tuning fork or structure of that nature. In Fig. 3 the coil also operates a sort of a microphone, one part of which is carried by a spring *b*, and the other by the bracket *j*, the upper part of the microphone being designated *h*, which can be adjusted towards and from the microphone element on the spring. Figs. 5 and 5^a, etc., show practically the same thing. All of these figures that I have referred to [110] maintain the two pole pieces in their proper spaced relation by the use of a plate designated *f*.

The COURT: Q. In what figure?

A. You see that in Fig. 1 and Fig. 2 and Fig. 3.

Q. By the letter *f*?

A. Yes, the letter *f*.

Mr. MILLER: Q. I think that is shown in Fig. 5, isn't it?

A. It is shown in Fig. 5-C—perhaps it is not shown there best. Well, you can see it very clearly in Fig. 3. In this little blue book a portion of Fig. 5 is shown where the brass plate is designated *f*. That is a spacing plate which is secured to the outer pole piece and closely embraces the inner pole piece so as to maintain these pieces in proper spaced relation and so maintain the air gap. In Fig. 6 Sir Oliver Lodge has shown several differ-

(Testimony of Samuel E. Fouts.)

Q. Do you know how it should be constructed?

A. Yes.

Q. Is there sufficient data appearing on the face of the figure, itself, to enable a person skilled in the art to construct it?

A. I should say there is. Those devices just under the plate E [112] at the top, called three supports, might be a little difficult to locate exactly, but the specification says they are put at the nodal line and I guess that could be determined.

Q. Is the device which is shown in this little blue book of mine underneath the title Fig. 5 of the Lodge article, will you just look at that device and state whether that is a faithful reproduction of the Fig. 5 which we have just been considering?

A. Yes, it is.

Q. Do you find any spacing device there for the poles?

A. Yes, upper head of the spool upon which the magnetizing coil is wound certainly is shown extending the entire space between the inner pole and the cylindrical shell.

Q. Would that have the effect of spacing those pole pieces?

A. Undoubtedly it would hold the inner core in a central position within the shell. Then the outer pole piece is set down within that shell so there could not be any relative movement between the two pole pieces, and it would maintain the pole pieces spaced.

(Testimony of Samuel E. Fouts.)

Q. Now, will you please look at the Johnsen patent, 1,075,786, and the British patent 12,141, of 1911, and just explain briefly what you find in that device relative to any matter in this suit?

A. The two patents, the British patent and the United States patent, are substantially identical. The numbers of the figures are the same in the two patents. So, if I describe one it will answer for both. I think we need not consider any of the figures on the first sheet of the drawing; they show structures which I think are not material to this particular case. I wish to direct attention first to Fig. 5 at the top of the second sheet. It shows a pot magnet in a central core with the coil 6 wound around it. The top of the magnet forms the outer pole piece. It has a central aperture into which the upper end of the core projects, and from [113] which it is spaced to form a circular air gap. As shown in that particular figure, the outer pole piece is lined with a sort of a ring of, I believe, particularly soft iron, although I think Johnsen says that may be used, or not, in other words it is optional; in that Fig. 5 the upper end of the inner core is tapered, a straight side taper like a cone. The opening within the outer pole piece is of corresponding taper. So that the air gap is tapered. The vibrating coil which is shown centrally positioned in the air gap is also tapered at the same angle. That coil is connected through the members 14 to a sort of a stirrer, 15, of a microphone arrangement which dips into a chamber 22 containing granular carbon, or something

(Testimony of Samuel E. Fouts.)

of that kind, so as to serve the purpose of a microphone. That microphone is in a local circuit with a battery shown at the right. That local circuit steps up transformers which generate current out in the wires 20 and 21. So that Fig. 5 is specifically illustrated as operating a microphone.

In Fig. 6, we have a somewhat modified structure in details of the magnet pole pieces. We have the device operating a vibratory element which functions somewhat as a diaphragm of a telephone receiver. That is what it is supposed to be. In that case the end of the inner core only is shown. That part marked 31 is supposed to be the inner core corresponding to the part marked 1^c up in Fig. 5; but instead of tapering up pretty much to a point, or to a truncated cone, like in Fig. 5, Fig. 6 shows the end of the pole piece with a head on it, kind of enlarged and rounded; the part shown to the right with cross hatched lines is a part of the outer pole piece. It has a rounded cavity concentric with the rounded surface of the core head. The vibratory oil marked 3^d is within the air gap between the head 1^d and the outer pole piece 2^d. [114] That coil is, of course, made sort of hemispherical to fit in that curved air space. In this particular structure it is connected to the diaphragm 23 by rods 26 which pass through a sort of a guide plate or steadying plate 27. When pulsating currents are sent through the coil 3^d the coil will be vibrated and through those connections

(Testimony of Samuel E. Fouts.)

26 will cause the diaphragm to vibrate with it. That diaphragm seems to be mounted loosely within the sound box 25, which has a horn 24 extending outwardly from it. These shapes of pole pieces and the vibrating coil are matters of choice; they can be most any old shape. The patent says practically that in the very last paragraph of the specifications, on page 4: "The form of the field and of the coil can, of course, be modified in various ways as regards profile and cross section. They can be straight, broken, or curved in profile and cross section, and may be round, oval, polygonal," etc.

In Fig. 7, for example, there is shown a sort of conical cone similar to that shown in Fig. 5 which I have described, except that only one of these—well, I guess it is practically the same thing; I was going to say that only one of the microphones is shown. Only one is shown in both of those. So Fig. 7 is practically what is shown in Fig. 5.

Fig. 8 shows a cylindrical coil. That is also shown in Fig. 9 in the end view. It is just an open round device such as we have seen in the various patents before discussed. The Fig. 8 coil could not of course be operated in either of the air gaps of Figs. 5 and 6, it simply would not go in there; so it must have a correspondingly shaped air gap within which it can operate. That is described on page 4 of the specifications, beginning with line 28, in which it is said:

(Testimony of Samuel E. Fouts.)

“Figs. 8 and 9 illustrate a cylindrical coil which is employed [115] when the faces of the pole pieces which are directed toward the field and also toward each other are cylindrical, the coil 3^f being made cylindrical to correspond.”

So when that shaped coil is employed the passing faces of the pole pieces will be cylindrical and spaced so as to receive this cylindrical coil. That coil is mounted upon a spider such as that shown in Fig. 11, which discloses a three-arm spider, or it may be a two-arm spider, as shown in Fig. 9. Figs. 12 and 13 show still other forms of spiders. In any of those forms the central part of the spider is attached to the end of the inner pole piece of the magnet by a screw which in Fig. 7 is indicated at 35. That screws into the end of the pole piece. Then to hold the coil to that screw a small screw 34 is inserted through the hub of the spider into the tapped-out end of the screw 35. Thus you get a structure which is almost the same as is shown in Plff's Ex. 4 so far as the mounting of that coil is concerned, and so far as the shape of the coil is concerned.

Q. Then if I understand the matter correctly, the Johnsen patent shows two forms of coil, one of which is bell-shaped or hemispherical, and the other of which is cylindrical?

A. It shows those two, and then it shows still another form here, Fig. 7, which is sort of conical. It shows the three and it shows several others. It says it may be round, oval, polygonal, etc.

(Testimony of Samuel E. Fouts.)

Q. Now, just look at the two colored pictures shown in this little blue book of mine on pages 14 and 15, the first one showing a bell-shaped coil and the other one showing a cylindrical coil, and state whether or not there is basis in the patent for those two representations, and in what respect do they represent the patent.

A. The first drawing to which you refer shows the structure shown in Fig. 6 of the patent mounted upon the pot magnet of Fig. 5. [116] Fig. 6 is on a larger scale than Fig. 5. I understand that photographs were taken of these two pictures of the drawings, and then one of them just superimposed on the other. That does build up the structure shown in this little blue book. The central part around about the coil is simply a photograph, somewhat reduced I think, of Fig. 6 of the patent. The rest of the magnetizing structure is, I understand, a photograph of the pot structure shown in Fig. 5, and the two put together. There certainly is warrant for doing that.

Q. Now, take up the other figure with the cylindrical coil and see if there is any basis in the patent for that.

A. That second drawing has the same pot structure of a magnet that is shown in Fig. 5 of the patent, except there was not shown that soft iron ring right around the opening. That is an optional thing, whether to use that or not. It was not shown in this drawing. It would not make any difference.

(Testimony of Samuel E. Fouts.)

It would simply show another insertion of a round piece in there. The magnetic structure is the same as shown in Fig. 5 with that exception, and with the further exception, too, that the opening for the coil is made cylindrical instead of tapered as it is in Fig. 5. The inner core or pole piece is tapered as it is in Fig. 5 until it approaches the air gap when it, too, is made cylindrical. So that the upper end of that inner core is cylindrical to fit within the cylindrical opening in the outer pole piece and leave a cylindrical air gap for the cylindrical vibratory coil of Fig. 8. I read what the specification said about Fig. 8. You have there the cylindrical coil which is used, it says, where the pole pieces are cylindrical and face each other. The way in which that coil is mounted to the inner pole piece is disclosed in Figs. 7 and 8 and in the specifications, the part which I read, and also in [117] the paragraph beginning at line 28 on page 4. Fig. 8 of the patent shows the spider arms 29—29 is the hub, the arms are 36; it shows the spider connected to a pair of microphones 15. The drawing which has been put in your little blue book, this second sheet, does not show the spider there operating microphones, but it operates a diaphragm like that of Fig. 6. That diaphragm is inside a sound box which is designated 25 as it is in Fig. 6. It has a horn 24 which is also as in Fig. 6. I consider that this structure shown in this second drawing of the little blue book is amply disclosed in the Johnson patent,

(Testimony of Samuel E. Fouts.)

and that the drawing is fully warranted by that disclosure. I may say that whereas Fig. 6 does not show just how the sound box is to be held in position on the outer pole piece, this drawing shows the sound box fastened to the pole piece in the conventional way as shown by numerous patents which already have been discussed; that is, it is screwed down, it is held in place by screws.

Q. I notice in the Pridham and Jensen patents the frequent use of the word "diaphragm." In what form is that diaphragm shown in those patents?

A. In the first patent in suit it is a disc which is clamped about its outer perimeter between the upper and lower parts of the sound box. Specifically, it is corrugated concentrically about the center there. So it is a sort of a corrugated disc. The next patent in suit shows in Fig. 2 a diaphragm not exactly like the one that is shown in the first patent. It is generally of that type. The one in the second patent seems to have two upwardly-directed corrugations and a sort of a depressed portion at the center; otherwise it is the same as in the first patent, as far as I see. In Fig. 4 of this second patent there is a perfectly plain diaphragm, just a flat plate without any corrugations on it, at all. [118]

Q. Is that diaphragm attached in any way at its periphery?

A. Yes. In all these cases it is clamped around

(Testimony of Samuel E. Fouts.)

its outer edge or periphery between the two parts of the sound box. It is a sort of a ring connection around the outside.

Q. What is the mode of operation of that diaphragm?

A. When force is applied to it it acts at the center—all these diaphragms, tending to push the diaphragm up at the center or pull it down at the center, vibrate it there, and as the diaphragm vibrates at the center it will vibrate out toward the edge but with gradual diminishing amplitude until it gets out to the place where it is clamped, where it cannot move. So you have the greatest amplitude at the center. That amplitude constantly diminishes as you go out toward the edge of the diaphragm, where it becomes nil. That is just what happens where you have the plain diaphragm of Fig. 4. Where you have the corrugated diaphragm the action would be somewhat modified because the corrugations, I think, would make the diaphragm a little more flexible; whereas you might get amplitude at the center, you might get greater amplitude at the center than you would in a plain one, you would get less, I think, as you get out toward the place where it is clamped. That is the general operation of them.

Q. What is the meaning of the word "diaphragm" in its broadest acceptance?

A. Well, in its broadest acceptance it seems to have been applied to most any sort of a vibratory

(Testimony of Samuel E. Fouts.)

member. In its more specific and, as I take it, its more accurate use it applies to some sort of a member which is attached around its outer edges and flexes in and out with its greatest amplitude in the center, like the so-called diaphragm within the human body, which is attached around the outer waist and separates the lung cavity from the abdominal cavity, it works up and down as one breathes. [119] That is true of a diaphragm.

Q. You are referring to what is known as the midriff in the human body?

A. Yes. The ear drum is another excellent illustration of what I conceive to be the true definition or true example of a diaphragm. It is fastened around its outer edges and vibrates with its greatest amplitude at the center. These devices shown here in these patents of Pridham and Jensen conform exactly to my idea of what a diaphragm is.

Q. You find in the latest patents also the word sound box; just state what that is.

A. Sound boxes did not originate, I think, themselves in the phonograph art, but I believe that term is applied to that structure. Structurally, it is about the same thing as shown, for example, in the Bell patent, which has been put in here as Defs' Ex. C. The term, as far as I know, was not applied at that time to the telephone receiver, although it is a sound box. It grew up in the phonograph art. I meant to say when you asked me what experience I had had that while I was in

(Testimony of Samuel E. Fouts.)

the Patent Office I had charge for two years of phonographs, or the art of acoustics, and became familiar with the terminology that was used at that time, and with the structures. A sound box is, as the name implies, a box. In its art it is a relatively thin box, one side of which is made up of a diaphragm. The diaphragm is clamped between the side walls of the box; the box cover projects over the outer face of the diaphragm and is separated a slight distance from it. That cover has an aperture opposite the center of the diaphragm. Usually, or, rather, often, I would say, the sound box is provided with a ferrule or something of the kind, to facilitate the attachment of ear pieces, or horns, or some amplifying device. That is my idea of a sound box, Mr. Miller. [120]

Q. Now, I have opened up the Magnavox machine which is in evidence here as Defs' Ex. A. I have taken off the top, as you will see. Now just show me the diaphragm.

A. This is the diaphragm, the part we have just removed, and which has the coil attached at its center. That has the corrugations of which I spoke a while ago.

Q. And when I put on the top piece like I do now, that little cavity between the under side of the top piece and the top of the diaphragm is the sound box, is it?

A. That is the sound box chamber.

The COURT: Q. Suppose that sound box

(Testimony of Samuel E. Fouts.)

chamber in the Pridham and Jensen patent was enlarged to correspond with what is now called the cone-shaped loudspeaker, would it produce sound without a horn?

A. I would not say it would not produce any sound at all; I think you would hear, probably, a little mouse-like squeak from it. That is about all you would hear. It would not be of any satisfaction as a reproducer of sound without the horn.

Q. No matter how large you made the so-called sound box?

A. To leave off the front part of the sound box, do you mean?

Q. Leave off the horn. Put every other element in it.

A. As I understand you, then, you want to know if you have the outer face of the sound box just like that exhibit enlarged?

Q. Enlarge every element in it, if you please; enlarge every element in it until it becomes a device as large as any one of the cone-shaped loudspeakers here in evidence, leaving off the horn, then would the device produce sound?

A. It would produce sound. I think it would produce sound, yes. It would be a distorted sound.

Q. Why distorted, any more than any other device?

A. For the reason that you are using the diaphragm within an enclosed chamber, and whenever the diaphragm is flexed it compresses the air within

(Testimony of Samuel E. Fouts.)

that chamber and the air to get out of that chamber must flow from [121] the outer parts toward the exit here at the middle; the mere fact that it is compressed in there gives rise to distortion of the sound waves.

Q. If it were not compressed in there there would not be any distortion. If you removed all compression and enlarged your box, what then?

A. Then you will have to remove the outer face of the sound box and take it away, and then you would have nothing but a couple of rings in there fastened on the diaphragm at the outer edge.

Q. I guess I don't make myself clear. I don't think I make myself clear to you, at all. The contention here seems to be that Pridham and Jensen have produced a device which requires a horn. Pridham and Jensen contend that everything that is necessary to produce sound is contained in this device which you have here before you. Now, then, I say, if we take this device and enlarge its dimensions will it not produce sound without a horn?

A. It will produce sound, yes.

Mr. MILLER: Q. What kind of sounds will it produce?

A. They will not be as sounds produced in free air, they will be distorted sounds.

The COURT: Q. Supposing you put in that aperture in that enlarged sound box a cone-shaped instrument, which of course would have some effect upon those sounds, would it not produce the same

(Testimony of Samuel E. Fouts.)

sounds which are produced by these other devices which are introduced here in evidence?

A. If you had a cone within a sound box, do you mean?

Q. Yes.

A. Yes; I think it would produce distortion. You would get a sound, but it would be a distorted sound; it would not be the pure tone sound.

Q. What gives the pure tone sound to these other instruments? [122]

A. You mean the cone instruments?

Q. Yes.

A. The force which causes the cone to vibrate is the force of the air waves. That is the originating of the current. That is what originated the current. I will put that this way. To originate those forces which cause the cone to vibrate there is some sound made which sets up pulsating currents in the coil of the cone. If those currents which are in that cone are in exact synchronism with the sound waves which produce them and there has been no distortion up to that point, they will act upon this diaphragm and will cause it to move back and forth in substantially a unitary movement; that is, it will move just as far at one point as it will at another, like a piston. That will set up in the air sound waves which exactly correspond, or substantially correspond, with the sound waves which set up the forces in the first place. That is, if somebody talked over through there and we were repro-

(Testimony of Samuel E. Fouts.)

ducing it here, it would be a faithful undistorted reproduction, because these waves have been pushed out and have not been compressed in any restricted space, and they would go just right out in the free air.

Q. The elements contained in these devices are simple and well known to the art, are they not? You will find the same elements in the conical loudspeakers that you find in the Pridham and Jensen loudspeaker. Is that not so?

A. You will not find in the conical loudspeaker any soundbox or diaphragm.

Q. Sound box or diaphragm! Can you produce sound without a diaphragm? Can you produce sound in any of these devices without a diaphragm?

A. You have to have a vibrating member and I suppose you can call it a diaphragm. A diaphragm generally is a circular disc.

Q. I don't care what you call it; you have to have something sim- [123] ilar to a diaphragm to produce sound, don't you?

A. Yes.

Q. In the telephone, or in any of these loudspeakers?

A. I think so.

Q. Now we say that the voice is amplified in the Pridham and Jensen devices by the use of a horn; in the conical loudspeakers it is amplified by the use of a cone. Is that not so?

A. In a sense, yes, that is true. It is amplified

(Testimony of Samuel E. Fouts.)

in the Pridham and Jensen structure by the use of the horn. In these others we get even greater amplification without a horn, and we get it because we have a cone, if that answers your question.

Q. If you take the elements that are contained in Pridham and Jensen and enlarge them, or if not enlarging them making such an arrangement of them as will permit the use of a cone, will you not get the same effect and produce the same sounds that the so-called conical loudspeakers produce?

A. I think so, if you arrange the parts there so that you can use a cone and do use a cone in there and not cause the movement of the cone to compress the air within some restricted space and then give it out again so as to distort the sound waves. If you can enlarge this structure through here so as to adapt it to one of those big cones and mount the cone in a frame open-like structure such as you have here, you practically have a cone instrument then, and it would play like it.

Q. Is not that what the defendants here have done?

A. The defendants have used a cone, yes.

Q. I say, isn't that what they have done?

A. I think that would be a fair thing to say, yes.

Q. As applied to this case there is not any magic to the words "free air," is there, because we have free air in a horn and we have free air in a cone.

A. You don't have a free air in the sound box.

(Testimony of Samuel E. Fouts.)

That is where the trouble comes in. After the air gets out [124] of the sound box and gets into the horn you don't have very much trouble with distortion. The distortion is in the sound box before it gets to the horn.

Mr. MILLER: Q. Diverging for a moment to another point, does this diaphragm which I have removed from the structure of Defs' Ex. A show the narrow metallic strips referred to in the patent?

A. Yes, thin metallic strips.

Q. Now, will you show me or tell me the difference in mode of operation of the diaphragm and the sound box of the plaintiff's patent and the cone of the defendants' machine?

A. In the sound box of plaintiff's patent the vibration of the diaphragm causes air to be compressed in that very shallow chamber of the sound box. These vibrations set up in that sound box waves of compressed air which travel toward the center and then emerge out through that ferrule at the center into the horn. That compression of the air within the sound box is what results in a distortion of the waves of the air. They do not issue directly from the diaphragm into the open free air, but are sent forward against the forward wall of the sound box, reflected back, etc., and by the time they have got out they have been distorted.

The COURT: Q. At the time they get out they are distorted; what happens after they get out?

A. They get out in the horn. The horn has

(Testimony of Samuel E. Fouts.)

a relatively large body of air that is within it. It is a good deal like the pipe of an organ, where a very little energy at the end of the pipe will set all the air within that organ pipe in motion so that it produces quite a considerable noise. That is what happens when these sound waves from the sound box finally get into the horn. Coming into its throat, it sets all this mass of air within the horn into vibration, whereas there was a very small amount of air in vibration in the horn: [125] it is sufficient to set all this big column of air in the horn into vibration, and that gives you considerable sound.

Q. The sound is not then distorted, is it, after it gets into the free air in the horn?

A. It is not further distorted, but the horn does not correct any distortions which have previously occurred; that is, if it is distorted when it gets to the throat of the horn it will emerge from the horn probably without any further distortion, but it certainly will not correct any distortion which had previously occurred before it got to the horn. That is the difference between the sound box operation and the operation of the conical structure.

Q. The difference would then be, would it— I will put it this way, in a measure the difference would be, in the Pridham and Jensen devices, as shown by these patents here in evidence, the compressed air which is distorted and travels toward the horn gets its free air in the horn, and in these

(Testimony of Samuel E. Fouts.)

devices of the defendants here the free air is in the cone?

A. Yes, I think that is pretty well put; I believe that is right, it is in the cone, and as the cone moves forward it just shoves the air right forward with it and it will go freely from it without any interference from any sound box structure, or any other structure.

Q. There is no interference, is there, in the Pridham and Jensen device—interference with that air you have mentioned?

A. Why, yes.

Q. Where is the interference?

(Witness refers to an enlargement of the patent drawing).

A. Now here is what I have been trying to explain. When this coil vibrates up and down this way, and Mr. Pridham said yesterday it sometimes goes half an inch, it goes one-quarter of an inch up and one-quarter down, and when it does that it makes a full half inch in amplitude. When that diaphragm, we will say, moves up there is a space in through here; [126] this diaphragm, of course, forms the lower wall of that chamber in there; as that flexes up it closes up this space; the air that is in there is squeezed, it is compressed; the only way it can get out at all is to flow laterally from this position over to here, or from this position over to here. That is what I have said resulted in the distortion of the waves, because instead of the air

(Testimony of Samuel E. Fouts.)

going right straight out it has been dashed against this inner wall through here, and then probably reflected back to the diaphragm, I don't know how many different reflections it would have in being battered back and forth until finally it is squeezed laterally and gets in the column of air. This air at the center will not have that distortion, or at least not so much of it. The wave of air that will be pushed forward from the center part will go direct down and into the horn. This part back here underneath the overhanging portion of the sound box will be compressed and the air will be squirted in from the side and it will not exactly be in phase with the waves shot out directly from the center; that is, you will have a portion come out here, and a portion out here, and finally join there. It will throw it out of phase. That is another thing that results in distortion.

Q. What effect does it have on the sound, if any?

A. That is hard to explain. Instead of there being a sound wave which would have a sharp turn it would be smeared, so to speak, it would be kind of spread out and be dulled. It is a hard thing to explain.

Q. You were speaking of this distortion of air. I would like to know what that means. It certainly does not destroy any sound waves that are in there, does it?

A. It does not destroy them, it just simply puts them out of their true form.

(Testimony of Samuel E. Fouts.)

Q. How do you know that?

A. All the literature teaches it.

Q. What does that mean, anyhow? That is just somebody's idea [127] about it, or guess about it, really, is it not, because they don't know?

A. Oh, I think they do know, your Honor.

Q. That distorted air comes out of there, and when a horn is applied it makes sweet music, we will say, or it gives the sound of a voice clearly. So the so-called distortion has in no wise affected the sound that is produced, has it, so far as anybody knows?

A. Oh, I think so.

Q. What makes you say that, Judge Fouts? Is it because you don't like a horn on a radio?

A. No; well, as a matter of fact, I don't like a horn on a radio.

Q. I don't think, either, it is convenient, but there are many people who think that a horn produces the better and the clearer sound. So then your so-called distortion of air does not mean anything, I don't think.

A. The horn does not operate very satisfactorily, on the tones of low frequency; on tones of high frequency it is more satisfactory.

Q. Of course, the conical-shaped loudspeaker is the one that is preferred now. There is not any doubt about that. You will find them, I presume, in all of the radios that are sold today.

(Testimony of Samuel E. Fouts.)

A. Practically so, I think.

Q. But there are many people who will tell you that the sounds produced by a horn are more pleasing to them than the sounds produced by a conical loudspeaker. So I cannot see what this argument of yours about distorted air means. I take it it does not affect the sound in any way.

A. I think that is where we have failed to make this plain to you. I don't know whether I can do it, or not.

Q. Judge Fouts, I can not see these things as plainly as you do. I don't think I can, because I have not had the experience in patent work that you have had. I doubt not but what I am [128] expressing myself very awkwardly to you.

A. There is not in evidence this Rice and Kellogg article, is there, Mr. Miller?

Mr. MILLER: I am going to put it in.

The WITNESS: Yes, you are going to put it in. That is a very instructive thing. They tell why this distortion occurs, what it is due to, and what they have done there, as they think, to remedy it. That might throw more light on it than I am capable of throwing on it. As to whether two different persons would prefer to hear one of these conical instruments or a horn instrument, or whether one would prefer one or the other depends, I think, largely on the training of the ear and on whether or not one would be able to detect a distortion of sound will depend upon the training of his ear.

(Testimony of Samuel E. Fouts.)

There are some people that I have known that I am sure could not tell one from the other. There are others who think they detect a great deal of difference between the two.

Mr. MILLER: Q. What is the mechanical movement or operation of the cone?

A. On vibrations of low frequency it is a bodily movement, that is, like a piston or a plunger, will produce a moving together with the same amplitude throughout. As the vibrations increase the outer portions of the horn seem to flex somewhat so that it does not move quite as far as the inner part. I think in this Rice and Kellogg article that you are going to speak of and also in Kellogg's patent, they say that when you get up to frequencies of between 3000 and 4000 then it ceases to move absolutely as a unit, but the outer parts, due to their own inertia, do not move quite so far as the inner part. If the cone moves forward it shifts the air in front of it, and it must do work in doing that, in displacing the air, and when you get up to a frequency of 3000 or 4000 that will result in the amplitude of [129] the outer part of the cone falling off a little bit. As a general proposition, you can see that it moves as a piston or as a plunger. That is true if the cone is made small, or even in a large cone if it is moved with slow frequency.

Q. You say the cone moves bodily up and down like a piston?

A. Yes.

(Testimony of Samuel E. Fouts.)

Q. And the diaphragm vibrates from the center to the circumference?

A. Yes; that is, the diaphragm that is clamped around its edges can not move where it is clamped and the central part will have the greatest amplitude, and it will just fall off gradually from the center out to the edge. It varies in amplitude from the center out, whereas in the cone type the amplitude is the same throughout the entire extent of the cone.

The COURT: Q. In a cone type, is it not merely an enlarging of the diaphragm?

A. I could not see it that way, your Honor, no.

Q. It has been enlarged, has it not?

A. It may be and generally it is. These are. Sometimes they make them smaller than that. I have two in my own home that are smaller than that—I think they are.

Q. Smaller cones, you mean?

A. Yes.

Q. How much smaller would you say?

A. I think mine is six inches across; this is about eight and a half.

Q. In the center of that cone which you have just measured is the diaphragm. Isn't that so?

A. Here is the cone, from here to around here.

Q. Where is the diaphragm?

A. Well, if you call it a diaphragm at all, and assuming it as the proper term, it would be the part that would be moving up here. It is the cone part.

Q. Then I say the diaphragm part has been enlarged to that extent, has it not?

(Testimony of Samuel E. Fouts.)

A. Yes. As this moves up and down you can see it [130] goes as a body, as a unit; it is not held out here and pushed up from below so that you get all your flexing at the center practically.

Q. What difference does that make?

A. In a structure of this kind, whether it is all open out through here, I don't think it would result in distortion, but it would diminish the amount of air that would be displaced, and would go down in the form of sound. Of course, the matter of a horn or no horn would come in there.

Q. I have heard something about self-sustaining sound waves in this art that is produced by these cones; just what is meant by that term?

A. That means that these cones, as they vibrate forwardly, will push the air and start up a sound wave. As they come back——

The COURT: Q. Where do you get your authority for that? Does anybody know that?

A. I thought that was primary in the art.

Q. There are a lot of things they talk about that they say are primary in the art and I wonder if they know what they are talking about.

A. If you take a bell and strike it with a tuning fork it vibrates back and forth. That always happens. Every time it comes forward and every time it comes back it will send out pulsating waves on the air. That is what happens with one of these cone devices. I have not a tuning fork or a bell. The whole thing goes forward like a piston and it

(Testimony of Samuel E. Fouts.)

gives a hunch to the air and almost immediately after that it gives another hunch to the air, and sends the air out in these waves of air, the self-sustaining waves of air, into the free atmosphere.

Q. I suppose the waves from a horn would do the same thing?

A. After it gets out, yes. The trouble with the waves is before they get into the horn. That is where the distortion comes. If [131] they could straighten out the distortion after getting into the horn it might come out one way or the other all right, one end or the other. That is the trouble.

Q. You think it comes out one end sour, do you?

A. Yes, because it goes in sour. I don't know whether I make myself plain on that, or not. If the waves that go into the horn are in any way distorted the horn will not remedy the matter, it will make it louder but it will not straighten out the trouble, it will come out the big end of the horn just as bad as it went in, and in a magnified way.

Q. Of course, we have all had radios. On our first radios we had horns. I think they are very good.

A. We thought they were good in those days, your Honor. You don't use one now, do you?

Q. Oh, no. I have a radio, of course, the same as everybody else has. I presume it has a cone in it of some kind.

A. I used to think my old horn type was good, too, but I don't think I would like it now.

Q. Have you looked at the file wrapper con-

(Testimony of Samuel E. Fouts.)

tents of the Pridham and Jensen patent No. 1,448,279?

A. Yes, I have.

Mr. MILLER: I offer it in evidence and ask that it be marked appropriately.

(The document was marked "Defs' Ex. AA")

Q. Now, I don't want you to plow through the interminable rejections of the Patent Office and the subsequent amendments, and the lengthy arguments of Pridham and Jensen in regard to this patent, I just want you to refer to one particular thing in this file wrapper which has a bearing upon the case here, and particularly upon claim 8 of the patent.

A. I notice in paper No. 5, amendment B, filed April 19, 1922—that is the office stamp of the date, the date given on the paper, itself, is April 4, 1922, [132] in that amendment I notice a claim which was then numbered 7. It stood in the case at the time that the Johnsen patent was discovered by the examiner for the first time. It was rejected on Johnsen.

Q. What was the claim and how was it worded before the rejection?

(Witness reads canceled claim 7)

The COURT: Q. What is the difference in the wording of claim 7 which you have just described and claim 8?

A. "Means within the casing for retaining said pole pieces in spaced relation." That is all. What

(Testimony of Samuel E. Fouts.)

this means to me is that Pridham and Jensen admitted that claim 7 is clearly anticipated by Johnsen. They asked for allowance of that claim on the ground it added to the subject-matter of claim 7, "Means within the casing for retaining said pole pieces in spaced relation." The claim was allowed. So that is the novel feature of the claim. Any means—the claim does not define any means for doing it. It is simply "any means."

Mr. MILLER: Q. So the only novelty in that claim, then, is means for spacing the pole pieces?

A. Yes.

Mr. MILLER: I offer in evidence the file wrapper and contents of the Pridham and Jensen patent 1,266,988.

(The document was marked "Defs' Ex. BB")

Q. Have you examined the patent issued to Kellogg, No. 1,707,617, of April 2, 1929, applied for on January 9, 1925?

A. I did, yes.

Mr. MILLER: I offer in evidence this Kellogg patent together with a publication printed by the patentee in September, 1925, explaining the invention and the operation thereof.

The offer was objected to on the ground that the patent was later than either of the two patents in suit and was immaterial so far as concerned any issues in this case. The objection was sustained; whereupon Mr. Miller stated, "I don't want to submit it as a proof of anything; I want it as part of my argument." [133]

(Testimony of Samuel E. Fouts.)

The COURT: I will admit it in evidence for that purpose.

Thereupon the patent and the publication were marked "Defs' Ex. CC to be used as a part of Mr. Miller's argument."

Mr. MILLER: Q. Yesterday, at the time of the interruption when you were asked a number of questions by the Court, had you quite finished the matter that you had under discussion before those questions began?

A. No, sir, I had not.

Q. Will you now please finish it?

A. I had only spoken of the distortion of the sound waves within the sound box as being one of the reasons why the sound box diaphragm and horn combination would not give as good a reproduction as the freely-floating cone——

The COURT: I think that is a matter of argument, and a matter of sales talk, probably. I don't care to hear anything more about that.

A. (continuing) I was not going to say anything more about it; I said that that was as far as I had got. There are a couple of other features that I did mean to speak about. Every vibrating member has a natural frequency or periodicity, that is, whenever impulses are set up about it, when they reach a certain frequency they will set this body into vibration. That occurs in the diaphragm of the sound box, and gives rise to what has been termed a blasting effect; that is, a phonograph may

(Testimony of Samuel E. Fouts.)

be playing along smoothly and satisfactorily until there is this particular frequency of vibration imposed upon it, when it will give out a roar or a blasting sound which is very unpleasant and disagreeable——

The COURT: Q. It is directed toward what issue?

A. On the question of the equivalency of the sound box diaphragm and horn combination and the freely-floating cone. Of course, structurally they are quite different. I was trying to show that they function in a different way and give different results. [134] This is one thing which is characteristic of the sound box, diaphragm and horn structure which does not apply to the freely-floating cone structure. I know that I have, and I daresay most of us have who have listened to the sound-box-diaphragm horn, observed this blasting effect. It is not speculative on my part. I have heard it, myself, many times. That is something that does not occur in the freely-floating cone type of instrument. Then the other thing that I meant to talk about is that the sound-box-diaphragm-horn combination does not satisfactorily reproduce the low tones. They may be satisfactory for the higher notes, but it does not reproduce the low thunderous tones such as one gets from pipe organs, or cellos, or bass viols, or bass horns. These tones are satisfactorily reproduced by the freely-floating cone type. The article which has been introduced here for the

(Testimony of Samuel E. Fouts.)

purpose of argument, that is, the Rice-Kellogg article, brings that out very clearly and—I would like to call the Court's attention to a picture that is in there that is just simply illustrative of the point I am trying to make. May I do that, your Honor?

The COURT: Yes, certainly.

A. (continuing) This is my copy of it. We have here, on page 983, and this is entered as Defs' Ex. CC, in the Fig. 2, a set-up which was made by these research men of the General Electric Company; they were trying to develop a loudspeaker; they finally did develop a loudspeaker known as the R.C.A. 104— They were trying to bring out all of the tones, high, intermediate, and low. So they set up this arrangement here, where they had three different horns, different sizes—

The COURT: If it is all described in there, do not repeat it to me.

A. (continuing) Yes, it is, and I can tell you what they found [135] out.

Q. That is all stated in there, too, isn't it?

A. It is. They found that even with that arrangement there—

Q. That the horns were not satisfactory?

A. That the big horn would not give the low tones. So they went to this floating diaphragm cone to give all tones.

Mr. LOFTUS: It all goes back to the quarrel between the Western Electric and the General Elec-

(Testimony of Samuel E. Fouts.)

tric, as to whether the cone was better than the horn. That battle has been going on for yars. The article the witness refers to is mere propaganda.

A. (continuing) They found out this gave a better reproduction of low tones than even the exponential horn that they had, and also that it gave the higher tones. So they did not give this entire combination anything, and they threw the whole thing away, and relied on one floating cone, which gave better results than the three of them together. That is the substance of it.

Q. You were about to refer to some patents obtained by Edison. That was the matter before us last evening when we adjourned. You may tell the Court something about those.

A. Yes, your Honor.

Mr. MILLER: Q. Considering for a moment the diaphragm shown in the Pridham and Jensen patent, consisting of a circular metal plate attached permanently at its periphery, is there any peculiar thing or characteristic about diaphragms of that kind that is known to the art, and which would militate against their perfection or efficiency in reproduction?

A. It has this natural period of vibration, of resonance in itself, and no matter how big the diaphragm would be, if it is clamped about its outer edges this natural periodicity will develop in the use of the instrument, it will give out the blasting sounds to which I referred a while ago. It can not

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be avoided, no matter how big they make the diaphragm. [136] You may get increased tones, but it will always be subject to this blasting effect when the frequency imposed on the diaphragm corresponds to the natural frequencies of the diaphragm as a member.

Q. Would that result in imperfect operation in reproducing sounds faithfully?

A. Yes, it would. I may also say that the horn, when it is applied to the sound box, also has its natural periods of vibration, its own resonance, and whenever the vibrations that are imposed upon it correspond to its periods of vibration the two will go into action and give out this blasting effect.

Q. What article are you referring to in this last answer?

A. I am talking about the sound box, diaphragm, horn combination. Whether it is made exactly according to the patent, or made any other way, it is inherent in that combination to have these two elements do this blasting that I speak of.

Q. Does that defect or default inhere in the paper truncated cone, at all?

A. No, not to any such extent as in the combination of which I spoke. The paper cone is made of such very light material, and it is so flexibly mounted, that the natural periodicity of the cone is so low that it is without the range, that is, substantially without the range of frequency of reproduction, that is, outside the range of the lowest

(Testimony of Samuel E. Fouts.)

tones which are reproduced and the highest notes. They try to get it that way, and it is substantially so. It is made so very light and so flexibly mounted that it was not objectionable, anyway. I have had two of those in my own home for three years, and I have never heard a blasting sound out of either of them so far.

I will now take up the five prior patents showing the thin metal strips. The first one is the British patent to Edison, No. 2909, of 1877, marked "Defs' Ex. V". The part that I wish to direct attention to is shown perhaps best in Fig. 1, although it [137] appears in some of the other figures. You see the diaphragm w and just below that extending in from the edge of the diaphragm to the center is this little member x , and that is the conductor for the current which leads to the center of the diaphragm. Mr. Edison says, on page 5, line 33:

"In all instances the telegraphic circuit at the diaphragm is made by a thin strip of platina or similar material extending to the center from the line or battery connection."

That is a thin metallic strip which leads the current to the center of the diaphragm.

The next patent is U. S. Patent to Edison, which has been marked here "Defs' Ex. W". This shows a structure very similar to the British patent I referred to. The diaphragm is shown at b ; this thin metallic strip is shown at c . The reference in the

(Testimony of Samuel E. Fouts.)

didn't get the question right. Just what was that question?

(Question read by the reporter.)

The WITNESS: I wanted to get it straight before I started out. Now, taking that British patent and reading claim 8—

The COURT: Well, does that stand as your answer to the question, the Siemens British patent, Ex. E, No. 4685, of 1877?

A. I say that is my best view of that matter. I say I realize that the metal strips are not disclosed there. Counsel asked for one single patent. I want to read the claim on Fig. 5 of that patent: "In a receiver for telephony—and that is what this is, it is a receiver for telephony—"the combination of a sound-box and its diaphragm"—and you have there the sound-box—You have the sound-box and the diaphragm in Fig. 5. "of a magnet field"—that certainly is present; "a vibrating conducting coil for the telephonic currents disposed in said field"; that is present there; it is an annular coil that moves up and down in the circular air gap of that magnet field. "and rigidly secured to the diaphragm"—that is also present. "and connections between said coil and the operating circuit." Now, obviously, Siemens had to have an operating circuit, and he had to have connections between the operating circuit and that coil. He does not show what kind of conductors he chooses to use for carrying the current in and out from that coil;

(Testimony of Samuel E. Fouts.)

consequently, he does not show the thin metallic strips secured to the diaphragm. That is all that Siemens lacks.

Q. In other words, he does not show the combination?

A. He does not show that specific kind of a conductor. In fact, he [140] does not show any conductor at all, but that must be read into the disclosure there, because it necessarily must be present.

Q. Turning to Fig. 6 of the Siemens patent, there is a sound-box and diaphragm shown there, too, is there not?

A. No, I don't think there is.

Q. Why not?

A. You have that trumpet-shaped cone, which is open at its upper face to the free air. There is no box structure there, that is, there is no sound-box chamber in front of that cone. That, in my view, is necessary to make a sound-box.

Q. Don't you consider that the type of diaphragm and mounting in Fig. 6 is the equivalent of the type of diaphragm and mounting in Fig. 5 of that patent?

A. No.

Q. And yet they are shown side by side in one and the same patent?

A. They are shown side by side.

Q. Going back to your own Patent Office rules, wouldn't that be considered an equivalent?

A. No, not necessarily.

(Testimony of Samuel E. Fouts.)

Q. You would not allow them in one and the same patent, then?

A. I would not probably allow claims to the specific structure in Fig. 5 and then in the same patent allow other claims for the specific structure in Fig. 6. They might take out two patents on the two things.

Q. Don't you think this patent taught the art that the open type of sound-box with a conical diaphragm was the equivalent of the closed type of sound box with the flat diaphragm?

A. No. It may have taught the art that the two structures there could be used to give off sound waves, but it did not teach that they could do it in the same way. That is necessary to make the two things equivalent.

Q. You do not find all the elements of claim 8 of patent 1,266,988 in your one best reference. Is that correct?

A. I don't find [141] those metallic strips in that patent. You have to use another structure with it.

Q. You have to build up a Mosaic?

A. You have to substitute thin metal strip conductors for whatever conductors Siemens did use. He had his choice, of course, as to whether he would use one or another to carry the current in. He had to use something. Now, then, the question is as to invention in selecting the thin metallic strips from the prior art to put on the Siemens diaphragm.

(Testimony of Samuel E. Fouts.)

Q. All these other patents that you have discussed in connection with claim 8 of patent 1,266,988 are transmitter patents, are they not? I refer now to Edison, Rogers, Richards, and Shreeve?

A. Fig. 1 of the Edison British patent is a transmitter, but he shows perhaps a dozen different set-ups here, and I can not tell without studying the specification whether they are all transmitters or whether there are some receivers. I would have to spend some time before I could give you a specific answer to that.

Q. Now, with respect to the second patent in suit, 1,448,279, pick out your one best and closest reference to claim 8.

A. There is little to choose as between the Sir Oliver Lodge structure shown in Fig. 5 in "The Electrician" of January 6, 1899, Ex. K, and the United States patent to Pollak, No. 939,625. Both of those patents disclose every element of the combination of the claim except the sound-box with its diaphragm. Both of them have a vibrating member which is connected to the vibrating coil. The vibrating member is not within a sound-box. I should like to apply that claim to these structures.

Q. You may do so.

A. Take the Sir Oliver Lodge magnet, Fig. 5 in "The Electrician," it is an electrodynamic receiver—

Q. Right there, let me ask you this question: Is that a loudspeaker in any sense?

(Testimony of Samuel E. Fouts.)

A. Yes. Your patent does not say anything about a loudspeaker. [142]

Q. Is this Sir Oliver Lodge instrument even a telephonic receiver? He designates it as a syntonic receiver. What do you understand by that?

A. A pure syntonic receiver is one that gives out or receives a single tone.

Q. Which would not be a telephone, or a loudspeaker, would it?

A. If that is what it actually does, it would not be adaptable for giving out broadcasting, various kinds of tones, no. But that is not what this is; he uses it for that, yes. I think probably he tried to adapt it to that particular purpose, because he says that while it worked fairly well, or something to that effect, until he loaded it with the heavy copper wire, that that dampened it so that it was not so much good as a syntonic receiver. This structure was used as a receiver for the voice. I think this article makes that very plain.

The COURT: Q. You don't mean to say that Sir Oliver Lodge didn't know what he was doing, do you?

A. No.

Q. He said it was a syntonic receiver.

A. It was adaptable for use as a syntonic receiver, but when he put that other coil on it upset the syntony, and he must have made it adaptable then, for receiving all sorts of tones. That is what I think it was intended for.

(Testimony of Samuel E. Fouts.)

Q. To receive all sorts of tones?

A. Yes.

Q. He said a single tone. I don't think there is much room for argument as to what Lodge intended since his deposition was taken.

A. I find on pages 4 and 5 of the Lodge British patent 9712, of 1898, which is Defs' Ex. J, a statement with reference to that structure shown as III in Fig. 6 of the drawing; that is an instrument very similar to this instrument that is shown in Fig. 5 of the publication "The Electrician" upon which I was relying. In that part of the specification Lodge says: [143] "The final instrument of the series is usually a loudspeaking iron disc or diaphragm telephone of some ordinary pattern suitable for importing vibrations to the air and so on to the ear, or it may be an electrodynamic or a Langdon-Davies phonophoric receiver or other instrument, for example, that shown in Fig. 8 whereby the vibrations are enabled through a relay to work a Morse or other telegraph instrument. I may use this plan of magnification as a call, or as a receiver in magnetic telegraph, but it is obviously applicable to other useful purposes, such as magnifying a speaker's voice by distributing it to various parts of a large hall." It seems to me that he means that that instrument III of Fig. 6 was intended to receive and send out speech. As I say, it is very similar to that shown in Fig. 5. I have not the slightest doubt that that would receive and give out articulate speech. As I said in

(Testimony of Samuel E. Fouts.)

the very beginning of this answer, there is probably no choice as between Fig. 5 of the Lodge structure and the United States patent to Pollak.

Q. Pollak has not anything to do with telephony, either as a telephone receiver or a loudspeaker, has it?

A. It does not have, as I said in the beginning, a sound-box structure; it is a device there, or a sort of a microphone arrangement, that is used in the reproduction of speech. It has the entire magnetic structure, a center core, the pot, and the means for spacing the poles, and the vibratory coil within the annular air gap, the vibrating coil connected to a diaphragm. That diaphragm does not, as I said, send out speech directly, but it serves as one of the elements of a microphone, and eventually the amplified sound is received down at the instrument shown in the lower part of Fig. 1.

Q. What has been your practical experience in subjects of this sort, that is, telephone receivers and loudspeakers? Have you [144] ever built any or made any tests of a practical nature?

A. No.

Q. All that you know about the subject is what you read in the Patent Office literature: Is that correct?

A. No, that is not correct.

Q. Then amplify your answer and explain it.

A. Going away back into the nineties, I have had phonographs and sound-boxes and horns.

(Testimony of Samuel E. Fouts.)

Q. Yes, in your home, like all the rest of us.

A. (continuing) And down at the Patent Office we had them there, too, and very frequently people would come in to make demonstrations on other instruments, so that I became fairly familiar with them. In my home I have at the present time a radio.

Q. We all have them. The Court has them, the reporter, and all the rest of us.

A. Yes, I suppose so.

Q. I am asking for practical experience as to constructing, and experimenting, and testing.

A. I answered that I had not done that, anymore, perhaps, than you, yourself. I am monkeying with my radio quite a good deal, trying to see how it is put together, and all that, but I never built one, no.

Q. Where did you get this theory of distortion that you were trying to explain to the Court yesterday?

A. I don't believe I can tell you just where I got it initially. I told you yesterday that I was for two years the examiner of the art of acoustics while I was in the Patent Office. During those two years I made it my business to learn what I could about the subject. I was handling particularly graphophones—phonographs, which was quite an active art back in those years. In connection with the Patent Office we had a large scientific library and a great deal of literature on the subject, and I made

(Testimony of Samuel E. Fouts.)

it my business to try and get myself informed on it. I think it was back in there [145] that those things kind of soaked into my consciousness. How I came to distinguish between the printed words "cat" and "dog", I could not tell you, but it was away back yonder somewhere.

Q. You don't mean to assert now that the sounds emitted by a horn are any more distorted than those emitted by a cone without a horn, do you?

A. Yes.

Q. That is simply your own observation from listening to one or two comparative devices?

A. It is my observation, and it is conformable to theory, too, scientific principles, as I have endeavored to explain.

Q. Would you agree with this statement, Mr. Fouts: "By flaring out to a large diameter at the open end"—speaking of a horn, "the effect is to replace the source which of itself has a very small area by a large nearly-flat source of equal rate of working, which is better adapted to radiate into infinite medium"—speaking of sound waves.

A. I don't understand what that means. I don't know whether I agree with it, or not.

Q. Where did you obtain your ideas of what a sound-box consisted of?

A. That was a term that was applied to the sound-box structure in the phonographic art; that is what a sound-box is, in my opinion.

Q. You got it out of the Patent Office literature?

(Testimony of Samuel E. Fouts.)

A. What do you mean by Patent Office literature?

Q. United States patents or other patents.

A. Yes, I don't doubt you will find that in a very great many patents, that term.

Q. Will you look at the Lumiere patent 1,036,529 and state whether or not you find a sound-box therein?

A. In the drawings of the patent I do not find anything that I should call a sound-box, no.

Q. Yet it is so described, is it not, and so claimed?

A. Yes. [146] This is a Frenchman, and I imagine he knows as much about the English language as some of us know about French. We probably would make the same mistakes.

Q. And yet that was passed and approved by the United States Patent Examiner, such as you were, was it not?

A. Apparently so.

Q. Did you happen to be in that division at that time?

A. No. This was filed in 1910; I was gone from there a long time before that.

Q. So that whether or not Lumiere was a Frenchman, it was up to the patent examiner to approve that expression as being substantially correct?

A. It was up to him either to pass it or to object to it. I don't know whether he objected to it, or not. Anyway, he ultimately did pass it, yes.

Q. So that what he shows there is known in the patent office as a sound-box?

(Testimony of Samuel E. Fouts.)

A. I don't think that is a fair way to put it, no. This single instance might have got by. I don't think that is any precedent to be relied on.

Q. Have you ever heard of Dayton C. Miller, of the Case School, at Cleveland?

A. Yes.

Q. He is an authority on the subject of acoustics, is he not?

A. I understand that he is.

Q. Have you ever read his book?

A. No. How recent is his book? I don't think that I did.

Q. This one was published in 1916.

A. No. I thought if it was in the scientific library of the Patent Office while I had charge of the art I might have read it.

Q. You would be inclined to accept his definition of a sound-box, would you not?

A. Well, he ought to be pretty good authority on the subject.

Q. I hand you a photostat and call your attention to the struc- [147] ture shown at the extreme left between the two rows of figures, and ask you if that is a sound-box and diaphragm.

A. You are asking me about this, are you?

Q. The structure at the extreme left between the two rows of figures, in Fig. 121.

A. And your question is whether that is a sound-box?

Q. And diaphragm.

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A. I certainly do not think so. In glancing over this hurriedly, I do not see where he says it is.

Q. I have not shown you all the book. So you are prepared now to disagree with Dayton C. Miller, are you?

A. If he says that is a sound box down there I should disagree with him.

Q. What about the structure at the extreme right of the top row of figures, is that a sound-box and diaphragm?

A. I assume that those elements which extend to the left there are the outside or front side of the diaphragm, so that the waves which are sent out of the diaphragm would travel to the left in that picture. I am assuming that.

Q. That is my understanding of it, yes.

A. Like it is in those other figures, in the same row, there?

Q. Yes.

A. I should not have called that a sound-box, no. I don't believe that term can properly be applied to that structure. Those others in that row I think are sound-boxes.

The photostat of Page 155, Dayton C. Miller's Book, referred to above, was marked "Plff's Ex. 7 for identification."

Q. Are you prepared to say that if the diaphragm and sound-box as illustrated in the Pridham and Jensen patents in suit were enlarged to correspond with the size of the cone diaphragm

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in either of the defendants' devices, and keeping in mind at the same time the opening shown at the top of the sound box would be correspondingly enlarged, that audible speech or music of sufficient volume that could be heard throughout a large room or auditorium [148] could not be reproduced? That question might be rather lengthy, but I want to get the witness pinned down to his reasons for that, because we can readily demonstrate the effect of it.

A. No, I would not want to say that it could not be heard. Those close to it could hear it. Whether those farther back in the auditorium could hear it, I don't know, but I would not want to say they could not.

Mr. LOFTUS: Q. In other words, you don't know; you have never tried it?

A. No, I have never tried it.

Q. And it is mere speculation, so far as you are concerned?

A. Yes.

Q. Why do you say that a cone diaphragm moves as a piston? Where did you get that theory?

A. From various sources. I have observed the operation of cones pretty carefully, and it seems to me they were so moving as a piston. Then the literature on the subject, and particularly this article of Rice and Kellogg, so states, that is, they move as a piston if the diameter of the cone is not too great, or if the frequency of vibration is not

(Testimony of Samuel E. Fouts.)

too great. If you increase the diameter and increase the frequency, then you depart somewhat from the pure piston action.

Q. Would you, if requested, know how to make a stroboscope test of the action on any diaphragm to determine just what its action was?

A. I don't know it by that term.

Q. What test would you make to determine the action of any diaphragm used in acoustics?

A. Do you mean by the use of some exact instruments?

Q. Yes.

A. I don't know. I don't know what I would use. I would have to make a selection. I have not anything in mind right now. What I have done was just to observe the best I could by my eye and by placing my hand on the vibrating cone [149] at various places and just judging by the feel of the thing. I can tell that it is vibrating. When I put my hand in various places it appears to be vibrating about the same amplitude everywhere.

Q. On all frequencies?

A. Well, I never detected any difference.

Q. Don't you realize, Mr. Fouts, that an entire cone on the higher frequencies could not move as a piston?

A. That depends upon the size of the cone.

Q. You don't know what the action is on the higher frequencies as compared with the lower frequencies, do you?

(Testimony of Samuel E. Fouts.)

A. I have stated it.

Q. And you claim that the cone moves as a piston on the higher frequencies?

A. I have told you over and over again that it did not.

Q. Then it does not move as a piston?

A. It is a good deal like taking an umbrella, you put it over you and you move it up and down slowly, I don't care what the amplitude is, you then move it as a piston. If you go on jerking it up and down and working it rapidly, the outer edges of the umbrella will tend to keep the same plane and the middle will go up and down. That is about how the cone will work.

Q. Is not that the same way that the diaphragm in the Pridham and Jensen patents will work, bearing in mind that the patents disclose a diagram of corrugations?

A. No, indeed; it is clamped around the edges, and it can not work at all like the umbrella I am talking about, even with slow amplitude or slow frequencies. The umbrella would go up and down as a piston. That thing could not move at all on the edges.

Q. Evidently you read some more literature last night, Mr. Fouts, [150] judging from the questions your counsel asked you this morning. I would like to have your definition of what causes blasting.

A. I will have to give you a couple of illustrations. I used to amuse myself as a boy by blowing

(Testimony of Samuel E. Fouts.)

on a cornet; frequently I would go to the piano and put down the loud pedal and give a short, sharp blast, say, on middle C, and then listen to the resonance coming out of that piano; I would have not only the tone that I had sounded, but I would have the octaves and the chords, etc.—a regular chord. That showed that those strings that were set in vibration were resounding to the original sound waves that I had sent out. The other day I was driving around in an automobile and I heard a sort of a rattle or a buzzing up in front; I could not locate it at first, but I found that the number plate up in the front of the machine was almost but not quite touching the part it was fastened to, and at a certain speed of the engine there would be enough vibration to set that number plate working and vibrating against the machine. I got out and pinched it up a little bit and there was no more noise. The point in that illustration is that I had gotten the engine vibration exactly to that point of natural frequency or resonance of that number plate and it set up the vibration. That is the way with a diaphragm.

Q. And do you call that blasting?

A. Blasting as applied to the number plate—no, I would not think of that in that connection.

Q. Do you know that blasting, as applied to sound reproducing diaphragms, has reference to any sort of a diaphragm that is not secured at its periphery, as in a sound-box or what you prefer to call a cone housing?

(Testimony of Samuel E. Fouts.)

A. No, I didn't know that. I don't know whether you do, or not.

Q. I do, yes.

A. Did you mean that it is applied to that only? If you mean that it is only applied to that I would certainly ques- [151] tion your understanding about it.

Q. The point you mentioned in your previous answer as regards periodicity—periodic vibration, everything has its own period of vibration?

A. Yes.

Q. And the cone has it, as well as the relatively small metal diaphragm?

A. With this distinction between those two structures: Where you take the metal diaphragm clamped about its edges and put it under a sort of a tension there, so that it is difficult to flex, and it has a quick return, when you get the frequency up to the natural periodicity of that diaphragm it is going to be set into vibrations of its own, it makes no difference whether it is a small diaphragm of a big one.

Q. Or whether it is made of paper or metal?

A. If you clamp a paper into a sound-box like you do the metal diaphragm, it will probably behave about the same way, except that it would be so very slight that I don't think the effect would be so great.

Q. It would not be there to the same degree, but it would be there, nevertheless, would it not?

A. I think it would be there nevertheless, but when you take the freely-floating cone, it does have natural periodicity, but it is so lightly and flexibly

(Testimony of Samuel E. Fouts.)

mounted that in all my experience with them I have never heard any of that blasting sound.

Q. I guess you have not seen all the cone types of loudspeakers on the market, because many of them omit this leather rim. Did you know that?

A. I never saw any that omitted it.

Q. That is the present practice. I guess that is all. No, I have one more question. In that sense you would not stress this freely-floating so much, would you, if the cone were all of one material—say stiff paper?

A. Oh, that is what you are getting at by that other structure you are speaking of, is it? [152] Undoubtedly instead of having that membranous piece hinged there they turned the cone out and clamped it, itself—is that what you mean?

Q. Yes, all one material of relatively stiff paper.

A. I never saw anything of the kind. I guess you are thinking of the Hopkins patent.

Q. Then you would not term that a freely-floating cone, would you, in the manner you have stressed here throughout your testimony?

A. No, it certainly does not float as freely as the other, and I would not call that a freely-floating cone.

Q. And having that in mind, you might want to modify some of the answers you have given here, might you not?

A. I don't think so. What, for instance?

Q. Well, where you stress the action of a freely-

(Testimony of Samuel E. Fouts.)

floating cone in order to do away with this blasting and this period of vibration, this natural period of vibration.

A. I think perhaps those cones which have this wide flaring base which are clamped rigidly in the frame structure around about there would have a greater tendency to the blast action than a freely-floating cone would have.

Q. Do you know anything about the action of a baffle?

A. What I have read about it. Since I became interested in this particular suit I have made some observations about it.

Q. Do you realize that the baffle—and that is used in connection with all of the defendant's devices, is it not?

A. As far as I know it is, yes.

Q. Do you realize that the baffle functions in the same manner as a horn?

A. I don't think it does.

Q. Why not?

A. That is going to lead us into quite a discussion here, but I think I can tell you why. The baffle in all the structures I have seen extends out at right angles to the axis [153] of the cone. I say all that I have seen—most of them are simply a part of the cabinet within which you mount your loudspeaker. That is not a horn, unless you would say it is a horn without any length whatever, that is, zero length. A horn is largely for the purpose of giving

(Testimony of Samuel E. Fouts.)

direction to the sound waves that are projected. It is a good deal like a speaking trumpet that we see used in athletic places. If you get in front of the trumpet you can hear what the announcer says; if you get off to one side of it, out of range of the waves that are sent out, you do not hear so well. That is one of the functions of a horn which a baffle does not have. The baffle is simply intended or used for the purpose of preventing the waves of compression on the front of the cone from passing around the edge of the cone, where they become neutralized by flowing into a vacuous space back there. It is understood that as the cone moves forward to compress the air it leaves a partial vacuum behind it. So we have in front a pressure above atmosphere, and at the back side we have a pressure below atmosphere. There is nothing separating these two regions except the cone. If the air were free to flow around the edge of the cone, the compressed air would simply be neutralized by flowing in the partial vacuum, and there would not be any sound waves sent out. That is the purpose of the baffle. It does not give any direction to the sound waves.

Q. You state that there is a compression of air on the front side of the cone, that is, on the concave side of the cone?

A. There is first a compression, then a rarefaction, then another compression. I was assuming an instant where we had a compression on the front of the cone and at the same instant there would be

(Testimony of Samuel E. Fouts.)

a region of low pressure immediately in back of the cone.

Q. Yesterday you were talking about free air with respect to the operation of the cone.

A. Yes, free air in front where you [154] would want the waves propagated.

Q. Didn't you just state there was a compression of free air on the front of the cone?

A. There is an instantaneous compression, and then an instantaneous rarefaction. Those are the waves you are sending out. Of course, the diaphragm has to send out the waves. The waves go out as free air without any obstruction.

Q. And that is true, also, of the enclosed type of sound box shown in the patents in suit, is it not?

A. No, sir.

Q. You have the instantaneous compression and rarefaction?

A. Yes, the instantaneous compression and rarefaction, but you do not have that free access to the open air that you do with the cone.

Re-direct Examination by Mr. Miller.

Q. On your cross-examination you were asked to look at the Lumiere patent 986,477, to see if he did not use the term "sound-box" in that patent. Will you please turn to the patent and refer to the language therein which uses the term "sound-box"?

A. I see one reference to one use of the term sound-box, in lines 27 and 28 on the first page. It is my recollection that there are other places in the patent where the same expression is used.

(Testimony of Samuel E. Fouts.)

Q. Will you read where that expression is used?

A. "The invention also relates to the sound-box in which said diaphragm is mounted."

I used to be considered a pretty good player of the cornet. I belonged to numerous bands and orchestras in my day. I have a piano. I play it some. That is, I used to. Since the development of the loud speakers and radios I have not used it a great [155] deal. I play the violin, but the cornet was my principal instrument. I am not now a member of a band; but I used to be a member of various bands. When I was in college I was a member of the college band and played the cornet. [156]

TESTIMONY OF J. A. BREID,

a witness on behalf of defendants.

Direct Examination by Mr. Miller:

I am a Patent Solicitor by profession and have been such for a good many years. I am familiar with Patent Office drawings and the method of reproducing or reading the same, and have been a draftsman for many years. I personally prepared this little blue book which is entitled "Pictorial Digest of the Art", or caused it to be prepared under my supervision. I laid out the work first from the various patents involved in the book, and one or two pictures which are not from patents, such

(Testimony of J. A. Breid.)

as the last one, the Atwater Kent cone speaker, and one other in here. These pictures were made by photographing the actual drawings of the various patents shown, and then they were colored. The only changes made at all were leaving of unnecessary lettering or reference characters which would confuse the issue. The pictures were enlarged in some cases from the original patents. All the coils were colored red. That was done in our office by my own draftsman and under by personal supervision. The magnets were colored blue. The diaphragms were colored green. The sound boxes, where they existed, were colored purple. The spacing rings, where they existed, were colored yellow. Suitable inscriptions were put at the bottom of each picture to show what the colors refer to.

The descriptions which are at the bottom of each picture were prepared by me. They are correct representations so far as I know. They are absolutely correct.

For instance, in the first case, here, the Siemens patent, I say, "Original invention of circular vibrating coil in circular magnetic air gap." My statement there that it is the original invention of the circular vibrating coil in a circular magnetic air gap is based on the fact that research showed nothing earlier than the Siemens patent, and therefore I felt that I was justified in saying that [157] that was the original invention.

The title page of the book I prepared as I pre-

(Testimony of J. A. Breid.)

pared the balance of the book. The title page, of course, speaks for itself, and states it to be merely a progressive schedule or chronological order of development of these various instruments, to show the gradual development of the vibrating coil and its application to various telephones of early development; also the advent of development of the spacing ring; also the advent or development of the pot magnet; the bringing of all the elements together by Lodge, pot magnet development, spacing ring development, floating coil development, and then, finally, the more recent patents which utilize these same elements. The pictures were selected from these various patents to show the chief steps in the development of the art. There were many other patents not shown in the book; these were simply the high points in the march of progress.

The statements contained on the title page are all correct so far as I am aware. I studied the art for over a month in preparing this book.

Cross-Examination by Mr. Loftus:

I am an associate of Mr. Miller, the counsel for defendants in this case. I am in his office; an employee of his office. Patents are given to me in my office to look over, to make a report. I made this while Mr. Miller was in New York.

All these pictures which relate to patents, except the one or two which do not relate to patents, such as the Atwater Kent cone speaker, and one or two

(Testimony of J. A. Breid.)

others, and with the exception of this one on 1913, the second picture of the Johnsen patent, they are actual photographs of the actual drawings in the patents. In the case of the Johnsen patent, it is a combination of two figures, actually [158] photographed from the Johnsen patents, and one put above the other. There has not been the slightest change of proportion or of size. The coloring matter on these pictures is water color, put over the parts by my man, and I watched him to see that nothing would be covered up that would distort anything or in any way carry a false impression. They were colored so that the Court could clearly see the red coil, the blue magnet, the yellow spacing ring, the purple sounding box, etc. They are not drawings. They are photographs of the drawings of the patents.

Q. Directing your attention to page 1899 as it is marked here in my copy of this little blue book, do you find anything in the British Lodge patent, at all like the figure shown there on the left-hand side of said page?

A. Yes, that left-hand figure was photographed from Fig. 5 of the Lodge British patent. It is an actual photograph colored up.

Q. Why didn't you photograph the entire figure?

A. Because we were only interested in showing the spacing plate and the circular magnetic gap. That is what this particular page was laid out for, to show that particular application of the spacing

(Testimony of J. A. Breid.)

ring secured to the bottom of the outer pole plate holding the central magnet in perfect spaced relation, precisely as it is in the plaintiff's loudspeaker patents, or telephone patents, rather.

Q. You did not consider it necessary to bring out the fact that this Fig. 5 of the Lodge British patent was a bi-polar instrument, and that the member marked F was for the purpose of serving as a shelf or vertical support for the top plate; is that correct?

A. No, that is not correct. It was put here for the purpose of showing the difference in that type of spacing ring as against the one shown in Fig. 5 in the Lodge article appearing on the right. In the Lodge article he said, as Judge Fouts pointed [159] out this morning, that he uses the spacing ring F in all the different figures. This figure was put here to show that type of spacing ring secured to the under part of the pole plate as against the other type in the figure to the right which extends across the cylinder or the inside of the pot and spaces the pole exactly like the third patent in suit. This was to show the spacing ring of the second patent in suit which Lodge said could be used everywhere and also showed the spacing ring of the third patent in suit. That is the only reason it was put there.

Q. In the British Lodge patent, where he shows a single central pole, as in Fig. 7, you do not find any spacing ring, do you?

A. I have not the Lodge patent before me. I am only testifying as to this book. This book selected

(Testimony of J. A. Breid.)

Fig. 5 to show that type of spacing ring which was secured to the bottom of the pole piece to show that Lodge had shown both types of spacing ring—both types which are shown in the plaintiff's structure.

Q. I find one here September, 1925; that is not taken from a patent, is it?

A. September, 1925, that is the date upon which the event occurred; that is, that is the Radio Corporation speaker 104. This particular picture is a picture of Radio Corporation speaker 104, which appeared on the market in September, 1925. As these various pictures here have the date indicated by the year, that is the date of their appearance on the stage which we are now enacting.

Q. But my question is whether or not that was a photograph taken from a patent.

A. No, that is not. There are two or three here which are drawings of the actual article. That is a drawing of the article. That is also true of the last two pictures which are the two forms of Atwater Kent speaker. They are also showings from the actual article. [160]

Q. You made that drawing?

A. I had the drawing made; that is, this particular drawing was first photographed from an exhibit which was used in the Thompson Case and—

Q. Don't mention that. Mr. Miller doesn't want that Thompson case mentioned, as I understand it.

A. Rather than redrawing this whole thing, and

(Testimony of J. A. Breid.)

since the drawing was once made, I had a photograph made of it. I had my draftsman carefully measure the R.C.A. speaker 104 and check these figures. I personally marked the word "magnet winding" on there. It looks like my writing, and I believe I marked it on there.

Q. And then you used your own interpretation of these patents in coloring them, as I understand it?

A. No, there is no interpretation. All the magnets have been colored blue; all the coils have been colored red; all the sound boxes have been colored purple; all the diaphragms have been colored green. There is no interpretation whatever. There is no change in the drawing, not even a slight change. They are photographs of the patent drawings and are absolutely correct.

Q. For example, if there is not any of your own interpretation here let me call your attention to the page marked 1888, which is a figure of the Mather patent. You do not find anything in the Mather patent pertaining to spacing rings, do you?

A. You see that upper disc of the coil attaching the inner pole to the outer cylinder and holding it in spaced relation? It absolutely is a spacing disc. I have the right to color something which manifestly is a spacing disc.

Q. You know that that is the end of the spool, don't you?

A. It fits tightly within the article exactly the

(Testimony of J. A. Breid.)

same as the last patent the claim of which you withdrew.

Q. You know it is the practice to wind these coils upon [161] a spool and that the ends of the spool fit loosely within the casing so that they may be dropped in and removed readily; is that not correct?

A. No, that is not correct, it is incorrect. For instance, in Lodge, of 1899, we see he fits the spool tightly and spaces the poles thereby. In the Mather patent he did the same. In the Magnavox patent, the last one, which was withdrawn, Claim 8, or Claim 9 shows exactly the same thing. They are absolutely identical. Therefore, it is not the practice, you see.

Q. Do you mean to say that these coils are driven in there by force?

A. I don't say they are driven in, I say that the head at the end of the coil is made to fit within the center and hold it to the center pole piece spaced exactly as in the Pridham and Jensen patent showing the same thing.

I don't know what material the head of the spool is made of. It could be anything. It can be wood; it can be any stiff material; whatever it is it functions precisely the same. I have followed drafting and engineering for many years. I have many patents of my own, and I know what a drawing is and I know what it means when I look at it.

By stipulation a copy of the deposition of Paul E. Sabine, taken in the case of *Magnavox v. Hart & Reno*, No. 2534, was offered in evidence, said deposition being as follows: [162]

DEPOSITION OF PAUL E. SABINE,

a witness on behalf of Defendants.

Sept. 29, 1931.

(Mr. WILKINSON: Messrs. Loftus, O'Connor and Kranz, representing the plaintiff, accompanied by Dr. Paul E. Sabine and counsel for defendants to the Stewart-Warner Corporation Radio Laboratory, where the Lodge loud speaker was operated by Mr. George M. Holly.)

Direct Examination by Mr. Wilkinson:

My name is Paul E. Sabine; I am 52 years old; I live in Geneva, Illinois, and am a research and consulting physicist by occupation. I am employed by the River Bank Laboratories, which is a company incorporated not for profit under the laws of Illinois and devoted to the study of problems in acoustics.

My training and experience tending to qualify me to explain to the Court acoustical devices and their operation, is this: I am a graduate of Harvard University. I have taken my Doctor's degree in physics. I was for two years assistant professor in physics at the Case School of Applied Science. For

(Deposition of Paul E. Sabine.)

the last 12 years I have been director of acoustical research at the River Bank Laboratories. I am a member of the American Physics Society and the Acoustical Society of America. I have devoted 12 years to research on problems in sound. I am the author of numerous technical papers on acoustical questions and have had 12 years' experience as a consultant.

I have read Pridham and Jensen patents Nos. 1,448,279 and 1,579,392, the patents in suit. I understand the construction and operation of the electrodynamic receivers illustrated and described in said patents. The term "sound box" is used in the said two patents. That term is well known in the acoustical art. [163] The term "sound box" arose in connection with the development of the phonograph and as employed in the phonograph art it refers to a small cylindrical box, one side of which is the diaphragm or other moving vibrating member, the other side being closed except for an opening usually terminating with a tubular extension to which the horn of the phonograph is attached. This nomenclature has subsequently in the development of loud speakers come to be used quite generally with a similar meaning except in the loud speaker the diaphragm is operated, not by a needle as in the phonograph, but by the electrical currents which are supplied to the loud speaker.

Q. Can you refer to any books of reference or

(Deposition of Paul E. Sabine.)

authorities to support your definition of a sound box?

A. Yes. The International Encyclopedia, the 1918 edition, in the article on Phonographs pictures substantially the construction which I have described. This is Volume XVIII, page 544. There are two figures here showing sound boxes and the diamond point of the Edison disk machine and soundbox and needle of the Victor machine.

In further support of that statement you will find in Dayton C. Miller's *Science of Musical Sounds*, published in 1916 by MacMillan Company, a reference to the diaphragm of the sound box of a phonograph.

The last edition of the *Encyclopedia Britannica*, in the article on Gramophones,—I have not the page, but it is in the 14th edition, 1929—it states that by 1905 a type of sound box has been evolved, the use of which has persisted for 20 years.

In the current literature on the subject of the reproduction of speech you will find frequent references to the sound box as used in loud speaking devices with horns. [164]

C. R. Hanna, in the *Journals of the Acoustical Society of America*, October, 1930, refers to loud speaker units in sound boxes for use with horns.

Maxfield and Harrison, in the *Bell System Technical Journal* for July, 1926, use the term "sound box" and refer to the air chamber which it encloses used in connection with the development of the Orthophonic phonograph.

(Deposition of Paul E. Sabine.)

In the Journal of the American Institute of Electrical Engineers, 1924, Hanna and Slepian have an article in which they discuss the operation of the horn and the part which the sound box plays in the reproduction by loud speaking devices.

Q.10 How does a sound box operate acoustically?

A. The sound box is a small almost wholly enclosed chamber. As I have stated, one side of it is connected with the member which produces vibrations of the diaphragm. One side of it is the diaphragm. And the movements of the diaphragm back and forth alternately contract and expand the volume of this chamber and the enclosed air and these volume changes are accompanied by pressure changes in the enclosed air. The smaller the volume of the box the greater will be the pressure change for a given displacement of the diaphragm.

Q.11 When a horn is used in connection with the sound box what is the resulting acoustical operation?

A. The large pressure changes in the sound box would not necessarily result in any considerable volume of sound. In order to utilize these large pressure changes as sound a considerable volume of air has to be set into vibration and the air cavity or the air enclosed in the sound box which is subjected to these large pressure changes connects directly through the throat of the horn with a larger volume of air with an expanding cross-section as the horn expands and these large pressure

(Deposition of Paul E. Sabine.)

changes operate directly on the air enclosed in the horn to produce vibrations in that column of air. This column of air may be vibrated as a whole, in which case the horn is emitting its fundamental tone, or it may vibrate in parts. As the diaphragm advances, decreasing the volume of the air enclosed in the sound box, it sets up a pulse of condensation in the air and the air is forced out under pressure into the horn. This movement is transferred through the expanding section of the horn and is finally radiated from the mouth of the horn as sound over a large area. In other words, the combination of sound box and horn act as a means of acoustically coupling the stiff, rather small, dense diaphragm, with a large volume of much lighter and much less dense air at the mouth of the horn. The combination serves as a means of acoustically coupling and corresponds to the impedance matching in electrical circuits where you want to transfer energy of oscillating current from one part of that circuit to another most efficiently. The sound box and horn increase the efficiency of the diaphragm as a sound producer.

In the said Pridham and Jensen patents the term "sound box" is used in the sense in which I have just defined it and I think it is properly used.

Q.13 Mr. Edwin S. Pridham, one of the joint patentees of the two patents in suit, in his deposition in this case stated on page 15 that in the case of loud speakers the term "sound box" "can be

(Deposition of Paul E. Sabine.)

used as a supporting medium or enclosure to support the diaphragm. There are many definitions of the word 'sound box.' It is not restricted to any particular or definite type of apparatus." Do you agree with the said statements of Mr. Pridham?
[165]

A. I do not agree with Mr. Pridham on that in the light of the quotations which I have already made or the authorities which I have already cited.

The term "sound box" does refer specifically to an enclosure and, moreover, engineers recognize the fact that this enclosure does form and the size of the opening does play an important acoustical function in the operation of the loud speaker device. So that any frame that holds the diaphragm cannot be properly spoken of as a sound box unless it fulfills the functions which I have already indicated as the function of the sound box.

I think the current literature bears that out, as well as the literature of the phonograph art in general.

Q.14 Mr. Pridham in his deposition referred to Lumiere's patent No. 986,477 to support his statement that a sound box may be merely a supporting frame. Do you regard that term "sound box" as correctly used in the said Lumiere patent?

A. Can you point out to me just what he calls the sound box there?

Q.15 You will notice on page 1 of the specifica-

(Deposition of Paul E. Sabine.)

tion of the said Lumiere patent, lines 27 and 28, the following statement occurs:

“The invention also relates to the sound box in which said diaphragm is mounted.”

Referring to the drawings of the said patent in which the part designated as 13 is merely a spider, do you regard the term “sound box” as properly applicable to that structure, for instance, as shown in Figure 7 of the said patent?

A. What is disclosed there does not, in my opinion, come under the commonly accepted usage as to the meaning of the term “sound box”. It certainly has no functional purpose from the [166] standpoint of sound and is not a box in any sense of the word, so that I think the term “sound box” as used in that patent is clearly a misnomer.

Q.16 Please explain the cooperative relation between the sound box diaphragm and coil attached thereto in the electrodynamic receivers illustrated and described in the Pridham and Jensen patents in suit.

A. Referring to Figure 2 of the Pridham and Jensen patent No. 1,448,279, we have disclosed a sound box 2, which is a metal box with a tubular extension, one side of which is a corrugated diaphragm, and to the center of this diaphragm, attached by a stud, is a small conical frame that carries a coil of wire. This coil of wire is wound on some sort of a ring and this is placed in the

(Deposition of Paul E. Sabine.)

annular space between the pole pieces of a magnet consisting of an outer shell of magnetizable material with a centrally mounted core. Around this centrally mounted core are turns of wire and, according to the description in the specification, a direct current is passed through this magnetizing coil, thus setting up a strong magnetic field in the annular air gap between the centrally mounted pole and the top of this soft iron casing which acts as the opposite pole of the electromagnet. The alternate currents passing through this coil of wire, the small coil, which I will call the voice coil, react with the magnetic field, producing a force on the coil of wire. The direction of this force is dependent on the direction in which the current flows. The alternations of the current in the voice coil produce this alternating force on the coil and this being rigidly attached to the diaphragm causes the diaphragm to move up and down, corresponding to the alternations or the oscillations of the electric current through the voice coil. [167] The motion of the diaphragm up and down varies the pressure in the sound box and these pressure variations, as I have already stated, will be transmitted to the air column enclosed by the horn which communicates with the sound box.

Q.17 Does the resiliency of the diaphragm and the fact that its fluctuations vary the air pressure in the sound box react in any way upon the coil in its movement?

(Deposition of Paul E. Sabine.)

A. The resiliency of the diaphragm furnishes a restoring force when the diaphragm is displaced and this restoring force tends to bring the diaphragm back to its undistorted or undisturbed position, so that the resiliency or the elasticity of the diaphragm does react on the coil; that is, it serves as one of the forces against which the oscillating electric current is doing work.

Q.18 How about the compression of the air in the sound box incident to the fluctuations of the diaphragm; does that have any reaction on the coil?

A. Yes, the reaction of the enclosed air on the diaphragm also forms part of the elastic restoring force which is exerted to restore the coil to its undisturbed position. The smaller that cavity, I may add, the greater is that force for a given displacement.

Q.19 If the horn were applied to the sound box of the electrodynamic receivers illustrated and described in the said Pridham and Jensen patents what would be the acoustical operative relation between the sound box and the horn?

A. The pressure changes set up in the sound box without the horn would simply be relieved by the flow of air in and out of the opening of the sound box. This flow in and out might take place, or does take place, without setting up acoustical [168] waves over any considerable volume of air. When you put a horn at the end of that tubular extension

(Deposition of Paul E. Sabine.)

the surge of air in and out of the sound box sets up a corresponding motion of the air at the throat of the horn and this motion is communicated through the expanding section of the horn to the mouth and we have radiated from the mouth of the horn sound over a large area; that is to say, the total amount of sound that is drawn from the loud speaking device for a given electrical input is increased by the combined action of the sound box and horn.

Q.20 Have you seen and listened to the operation of an electrodynamic receiver made in substantial accordance with the disclosures of Pridham and Jensen patent No. 1,579,392 when used in conjunction with a horn?

A. Yes.

Q.21 I call your attention to a device and ask you to examine same and state whether or not you can identify it.

A. That is the device which I heard at the Stewart-Warner Laboratories one day last week.

(Mr. WILKINSON: The device identified by the witness bears a name plate with the following inscription: "Radio Magnavox Type RS Mod. D No. 150971 The Magnavox Co., Oakland, California," and the same is offered in evidence as defendants' Exhibit 1.)

Q.22 I call your attention to a copy of plaintiff's exhibit C, which illustrates the defendants' loud speaker complained of in this suit, and ask

(Deposition of Paul E. Sabine.)

you whether you understand the construction and operation of it.

A. I have examined and listened to the operation of a loud speaker substantially conforming to that illustrated in the said drawing, plaintiff's Exhibit C. That is the device that I heard. [169]

(Mr. WILKINSON: The device identified by the witness bears a name plate having on it the inscription "Stewart-Warner Made in U. S. A. Dynamic Reproducer Model 445-A" and is offered in evidence as Def.'s Exhibit 2.)

Q.25 Does the said loud speaker as illustrated in the said drawing, Plff's. Ex. C, and exemplified by Def's. Ex. 1 comprise a sound box?

A. No, I should say not.

Q.26 Please give your reason for your answer.

A. Structurally I see no construction that could be properly termed a sound box. Acoustically there is nothing in this loud speaker that performs the function of a sound box in conjunction with a horn in loud speaking devices. In this case the vibration of the cone diaphragm is transmitted directly to the free air. In the case of the sound box and horn, as already indicated, there is a coupling between the diaphragm, an acoustical coupling, by way of the sound box and the horn, between the vibrating member and the free atmosphere.

Q.27 Please compare the construction and operation of a cone diaphragm such as is present in de-

(Deposition of Paul E. Sabine.)

defendants' loud speaker with a sound box diaphragm such as illustrated and described in the two Pridham and Jensen patents in suit.

A. Both devices, of course, are operated by the reaction between an alternating current and a magnetic field. In other words, they are both of the electrodynamic type of sound reproducer.

In the Pridham and Jensen device the moving coil is attached to a small, relatively stiff, diaphragm rigidly clamped at its periphery and this diaphragm constitutes one side of the sound box. The small amplitude of the pressure vibrations of the [170] diaphragm in the Pridham and Jensen device is converted into larger amplitude vibrations over a large area through the medium of the sound box and horn.

In the cone type the vibrating member is of light construction flexibly mounted and held at its periphery and is thus relatively free from elastic restraints. Its vibrations are correspondingly greater and these vibrations are transmitted directly to the free atmosphere without the intervention of the coupling system which comprises the sound box and horn.

Q. 28 Please describe the operation of defendants' loud speaker with particular reference to the cooperative relation between the coil and the cone diaphragm, and in doing so please compare such cooperative relation with that which exists

(Deposition of Paul E. Sabine.)

between the coil and sound box diaphragm in the receivers illustrated and described in the two Pridham patents in suit when they are provided with a horn.

A. On account of its shape, the cone in the cone type of loud speaker tends to move as a whole. The force on the diaphragm is exerted at the vortex of the cone, so that there is less tendency for the cone, considered as a diaphragm, when in vibration to break up into segments.

The elastic restraints are small. Therefore, the thing which determines the amplitude of the cone largely is the mass of the cone. It is an inertia controlled device. It can be shown mathematically that under the influence of inertia alone the amplitude of motion of a body will vary inversely as the square of the frequency for a given value of the driving force. This means that an inertia controlled device will radiate more powerfully the low frequencies than would a device in which the elasticity is the controlling factor. As a result the cone type [171] of speaker, as is well known, is much more efficient in radiating the low frequency portion of the sound spectrum, and this is one of the decided advantages of the cone type of speaker.

In the case of the small clamped diaphragm of the Pridham and Jensen type, the elastic restoring force is not small in comparison with the part played by the inertia of the diaphragm and the coil. Therefore, the Pridham and Jensen type with the

(Deposition of Paul E. Sabine.)

small diaphragm clamped at its edges has natural frequencies to which it responds more vigorously than it responds to other frequencies, with resulting distortion in the sound which it produces. For a diaphragm such as is shown in the defendants' device these natural frequencies will lie perhaps somewhere near the middle of the frequency range, and we find that the response of this type of speaker is much greater to the middle frequencies than it is to the extremely low frequencies. That is the essential difference between the cone type and the clamped diaphragm sound box type.

In the clamped diaphragm type you have a dense diaphragm creating large pressure changes in a small air cavity.

In the cone type you have large amplitudes transmitted directly to the air.

In order to compensate in a measure for the distortion produced by the diaphragm and also to increase the efficiency of the small clamped diaphragm type a horn is added. If this horn is of only moderate length, even though it is well designed, it will have its own natural frequencies to which it will respond more vigorously than to other frequencies. The result with a horn of moderate length used is it adds further distortion. In order to have as faithful reproduction with a small diaphragm as you have with the larger cone type a long horn is necessary. [172] In the Orthophonic phonograph the improvement they effect there calls

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for a horn something like 85 inches in length, and that was an essential part of the Orthophonic improvement.

Q. 29 You have said that in the sound box diaphragm as disclosed in the Pridham and Jensen patents the resiliency of the diaphragm which is directly connected to the coil and the compression of the air in the sound box react upon the coil. Is the coil which operates the cone in the defendants' loud speaker subject to such reactions?

A. There would be no reaction due to pressure changes set up in a small cavity in the cone type, but there would be a reaction due to radiation of sound from that cone. In other words, the radiation of sound also puts a load on the moving coil.

Q. 31 How would the load put upon the moving coil by the resilience of the diaphragm compare with any load that may be put upon the coil in the defendants' loud speaker, as you point out, in which the cone is mounted for substantially bodily movement.

A. I don't know that I can answer that question, Mr. Wilkinson, right off the bat.

In each case you have a reaction due to the fact that you are working against a force, the coil is working against a force, and as to the relative magnitude of those two reactions and the part that is to be ascribed in one case to inertia and in the other case to elasticity is something that I am not prepared to answer.

(Deposition of Paul E. Sabine.)

includes a stationary and fixed magnetic field with a coil of wire which is free to move. The coil experiences alternating forces coinciding with the alternations of the electrical current and movements are set up in it which are communicated to a diaphragm to which the coil is attached. The first method is ordinarily called the electromagnetic method and the second method the electrodynamic.

In 1887 Hertz in Germany discovered the fact that electromagnetic disturbances set up waves in free space and it was early recognized that this was a possible means of communication.

One of the most important problems in the development of wireless communication was the production of devices that were sufficiently sensitive to respond to the feeble electrical impulses. Oliver Lodge in England was one of the pioneers in this field and on December 8, 1898, he delivered a paper before the Institute of Electrical Engineers in London on the subject of improvements in magnetic space telegraphy. This paper is reported in the *Journal of the Institute* and it is also reported more or less identically in the other publications cited in the question. [175]

It is well to point out that Lodge specifically makes no claims of discovery in principle, but simply claims to have improved devices which were already known for amplifying the effects of weak electrical impulses.

Lodge was primarily interested, of course, in

(Deposition of Paul E. Sabine.)

securing extremely sensitive devices and he secured increased sensitivity in three distinct ways, which he outlines quite in detail in his paper. The first was by syntonically operated devices. Two devices operate syntonically when they are tuned to the same frequencies. He used the term "to operate syntonically" to cover electrical and mechanical tuning and he shows a number of telephonic devices in which he secured increased sensitivity by tuning the transmitting and receiving devices to the same pitch.

The second general type of device which he describes are devices in which the tremors excited in a moving coil placed in a fixed magnetic field are transmitted to a movable plate or sound board. Lodge used to term it a sound board.

Then the third device he called the magnifying telephone, which will be described in detail a little later.

The syntonic devices were usually tuning forks with means for actuating the tuning forks similar to the moving coil method of which I have already spoken.

Now in the vibrating coil telephone with sound board the first type which he describes is given on page 837 in the Institute of Electrical Engineers paper. I will also refer to the other figure, which is Figure 4, page 367, in *The Electrician*. You will note that those two drawings are not identical. In *The Electrician* article he shows, for example, leads

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extending to the coil C and a different lettering. The devices, however, are essentially the same. In that device we have an electromagnet [176] with the like poles placed close together leaving a gap in which the moving coil mounted on a stretched wire is placed. The presence of the two unlike poles close together give what is substantially a radial field through the coil, so that when any current passes through the coil there will be a force exerted on the coil. This taut wire which supports the coil is attached to the center of the diaphragm of a sound board marked E and the operation is essentially that of the ordinary electrodynamic type of receiver.

Lodge does not have so very much to say about that device and presumably it was not very efficient because the field through the coil would be weak, but it operated, obviously.

The next device which he calls attention to is shown in Fig. 7 of the Electrical Institute paper and in Fig. 5 of *The Electrician*. Fig. 5 is also on page 367. There again you will notice that in *The Electrician* illustration the details of construction and the dimensions are shown and it is to be presumed that this is a working drawing of the device intended. There we have a cylindrical magnetic shell enclosing a central pole piece with a magnetizing coil wound around the central pole piece. The top of the cylindrical shell is also of magnetic material and serves as one pole of the electro magnet. There is a hole considerably larger than the central pole piece in the center of the top of the case and in the

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annular space surrounding the central pole piece there is shown a coil of wire which is attached to a wooden disk. This wooden disk is supported on three supports located, not at the periphery of the disk, but on a nodal circle of this disk. Lodge states that so mounted it behaves as a circular sort of harmonicon reed. [177]

In Fig. 8, on page 839, of the Institute of Electrical Engineers article and in Fig. 12, page 404 of *The Electrician*, he shows a still further form, and this is the same as Fig. 1 in the Lodge patent No. 9712. We find in his description of this the coil is attached to a light wooden tripod or stiff cone, which in turn is attached to a large sound board as indicated in the drawing.

These three forms are typical of the vibrating coil and sound board type of device which Lodge developed.

Then he further discloses another device which he calls a magnifying telephone, in which we have the moving coil in the magnetic field as in the other devices described, and this is attached to the diaphragm of a carbon microphone. This device was to be used as an amplifier. The carbon microphone was attached in series with a local battery and the signals which were received were sent through the suspended coil which was set into action by their action, thus varying the pressure on the carbon granules of the microphone, producing variations in the local circuit.

All of these devices were intended as sensitive devices for picking up electrical signals, but Lodge

(Deposition of Paul E. Sabine.)

clearly recognized that they had other uses. For example, on page 846 of the Institute of Electrical Engineers' article he states:

“The last telephone of the series has been so far represented as one of ordinary pattern, but it is obvious that the vibrating coil attached to a wooden sound board may be employed; and, further, that a combination of such sound board telephones may have an important application to the human voice and the acoustics of buildings—a different subject into which I will not now further go.”

He is referring here to the series shown in Figure 12, pages 843, in which is represented two of his magnifying microphones M_1 and M_2 terminated by a loud speaker III.

In the magnifying telephone Lodge was making use of the pressure variations set up by the oscillating currents to change [178] the resistance of his microphones. That Lodge contemplated the use of his devices as loud speaking instruments is shown by the reference, page 5, line 31, where he says:

“No. III is a loud-speaking telephone consisting of a vibratory coil and sound board, like Figure 1.”

He also states, line 5 of page 5 of patent No. 9712:

“I may use this plan of magnification as a call, or as a receiver in magnetic telegraphy,

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but it is obviously applicable to other useful purposes such as magnifying a speaker's voice by distributing it to various parts of a large hall."

In the Institute of Electrical Engineers paper it is obvious that Lodge showed certain demonstrations which are not referred to specifically in the paper.

On page 892, in the discussion which followed at the next meeting of the Institute of Electrical Engineers, Mr. Evershed states:

"It is clear from what we all heard of Dr. Lodge's telephones, that they are at least equal to the ordinary patterns as speech instruments, and electrically they are infinitely superior."

So that in this development of Lodge's we have an anticipation of the modern electrodynamic speaker of the moving coil type. If in Fig. 5 of *The Electrician* article we substitute for the wooden disk a light paper cone, we have a device corresponding in principle and in construction to the cone type of loud speaker.

The sounding board in all of these moving coil devices which Lodge disclosed is simply a device by which tremors of the moving coil are transmitted to the large area of a flexible body from which they are radiated as sound. In everything except the possession of vacuum tubes it would appear that Lodge anticipated the modern methods of amplifying speech reproduction. [179]

(Deposition of Paul E. Sabine.)

(Mr. WILKINSON: Photostatic copies of pages 246 to 248, Vol. XXVII of the March 2, 1899, edition of *The Electrical Engineer* are offered in evidence as Defs'. Ex. 4. Photostatic copies of pages 269 to 271 of the Dec. 16, 1898, edition; pages 305 to 309 of the Dec. 23, 1898, edition; pages 366 and 367 of the Jan. 6, 1899, edition; and pages 402 to 405 of the Jan. 13, 1899, edition of *The Electrician* are offered in evidence as Defs'. Ex. 5. Photostatic copies of pages 798 to 922 of *The Institute of Electrical Engineers*, Vol. XXVII, No. 565, are offered in evidence as Defs'. Ex. 6.)

I have seen a device like that illustrated in Fig. 5, page 367 of *The Electrician*, and Fig. 5, page 247 of *The Electrical Engineer*, and described in said publications. That is the device I saw and heard.

(Mr. WILKINSON: The said device identified by the witness is offered in evidence as Defs'. Ex. 7.)

I have listened to the said device in operation. It performed as a loud speaker fitted to a radio set of the Stewart-Warner type. It produced speech that could be easily heard at a distance of something in the neighborhood of 20 to 25 feet and understood. The enunciation was good. It also produced music in which the various types of musical instruments could be distinguished and it operates as a loud speaker.

Q. 38 When the said device was operated in your

(Deposition of Paul E. Sabine.)

presence in what way were the sound waves generated for reproduction maintained?

A. This device was operated both as the loud speaker of a radio receiver and also as the loud speaker of an electrical phonograph with vacuum tube amplifier.

Q. 39 Will you please compare the said loud speaker as embodied in the said Defs'. Ex. 7 and as illustrated in the Lodge articles to [180] which you have referred with defendants' loud speaker and also with the electrodynamic receivers disclosed in the two Pridham patents in suit? In doing so, if you desire, you may refer to an enlarged photograph of Fig. 5 appearing in the said two publications.

A. The following features are the same in all three devices:

1. A shell composed of magnetizable material, a central pole piece, a magnetizing coil, a circular pole piece constituting the top of the shell with a hole of larger diameter than the diameter of the central pole piece, thus producing an annular air gap between the central pole piece and the top of the magnetizing shell.

2. A magnetizing coil supplied with direct current which excites the electromagnet described.

3. A light coil suspended in the magnetic field in the annular gap.

In the Pridham and Jensen device the light coil is rigidly attached to a corrugated metal diaphragm

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rigidly clamped at its edges, which diaphragm constitutes one side of the sound box of the Pridham and Jensen electrodynamic receiver.

In the Stewart-Warner free edge cone the coil is attached to the apex of the cone, said cone being flexibly attached at its periphery to an open frame construction.

Q. 40 Will you also compare the operation of the said Lodge loud speaker with the operation of defendants' loud speaker and with the operation of the electrodynamic receivers disclosed in the Pridham patents in suit when they are supplied with horns?

A. The action of the Lodge device in the production of sound waves is essentially the same as that of the cone type of speaker. Substitute for the wooden disk E of the Lodge device the fiber cone flexibly attached at its periphery of the defendants' device and the two constructions would be practically the same, acoustically considered. [181]

In the Pridham and Jensen device the moving coil is attached to a metal diaphragm rigidly clamped at its circumference, which diaphragm constitutes one side of the sound box. In the Lodge and Stewart-Warner devices sound is radiated directly from the moving member which is attached to the coil. In the Pridham and Jensen device sound is radiated from the mouth of the horn used in connection therewith.

(Deposition of Paul E. Sabine.)

Q. 41 You have referred to the substitution of a cone for the wooden diaphragm E of the Lodge device. Was such substitution made in your presence in Defs'. Ex. 7?

A. It was and I heard the device operate after such substitution had been made.

Q. 43 What were the results?

A. When the cone of the defendants' loud speaker was substituted for the wooden disk the improvement was very marked both in the volume of sound produced and in the quality. In fact, so operated the Lodge device might well be mistaken for a modern loud speaker of the cone type. This is the device that was clamped to the Lodge device in the place of the wooden disk.

Mr. WILKINSON: The cone device identified by the witness is offered in evidence as Defs'. Ex. 8.

Q. 45 I notice that in the publication of the Lodge paper in the Institute of Electrical Engineers, page 840, the following statement is made:

“The loading, however, would spoil all this damping, so that considered as a syntonic receiver it was not successful.”

Will you please explain what you understand to have been meant by the statement that “as a syntonic receiver it was not successful”?

A. You must bear in mind what Lodge was after. In the early parts of this paper he speaks of increasing the sensitivity [182] of his receiving devices by syntony or tuning. At this particular stage

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he was looking for an extremely sensitive tuned "pick-up." The sharpness of tuning of a system depends upon the damping. Highly damped systems cannot be sharply tuned, that is, tuned so that they will respond much more vigorously to a given frequency than to other frequencies. The loading of the wooden disk with the heavy coil increases the damping and decreased the value of the device for Lodge's immediate purpose. This does not imply that the device was not successful as a loud speaker telephone receiver for mixed frequencies.

Q. 45 If, as stated by Dr. Lodge in the quotation made in my preceding question, the device he referred to was not successful as a syntonic receiver, what, if any, bearing would that have upon the success of the device as a loud speaker?

A. In a loud speaker what is desired for good quality is uniform response to all frequencies. In a syntonic receiver what Lodge wanted was a device that would respond to a single frequency. Speaking generally, a syntonic receiver would not show good quality for speech and music since it would give preponderance to the frequency for which it was tuned.

Mr. WILKINSON: The enlarged photograph of Fig. 5 from *The Electrical Engineer* and *The Electrician* is offered in evidence as Defs'. Ex. 9. [183]

Cross-Examination by Mr. Loftus:

The use of the term "sound-box" originated in the phonograph art, but current literature on loud

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speakers indicates that the term "sound-box" has been applied with the same significance when dealing with loud speaking devices not strictly phonographs. The type of sound-box used in a loud speaker would serve the same purpose acoustically as in the case of phonographs. My actual experience with phonographs and loud speakers is that I have had to use loud speakers in my acoustical research as sources of sound. I have had occasion to use the Magnavox device with special modifications for what Lodge would call the syntonic device. Most of my work has been in the line of architectural acoustics, which involve measurements of intensity by various means, and problems associated with sound in rooms and in buildings in general. Primarily it has nothing to do with the problems in connection with designs of instruments for generating sound. My attention was first called to the Lodge loud speaker in connection with the suit of *The Magnavox Company v. Thompson*. That was a matter of just a few years ago. I had been familiar with the Magnavox loud speakers for a matter of several years prior to that time. In the case of the Pridham and Jensen patents there is no flexible annular ring between the point at which it is clamped and the main body of the vibrating member. It is all one. I have seen Stewart-Warner loud speakers where the diaphragm is all of the same material. Such diaphragms would not be as rigidly clamped as the diaphragm shown in the Pridham and Jensen patents because it is a

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larger diaphragm in the first place, and in the second place it is of less rigid material. I do not find any particular material specified in the Pridham and Jensen patents, but in the Pridham and Jensen devices which I have seen the [184] diaphragm is a metallic material. It is possible, perhaps, to make such metallic diaphragms just as flexible as the paper cone. In comparing the operation of the cone-type diaphragm as exhibited in the Stewart-Warner loud speaker with what I have termed the sound box and horn, it is not simply a question of the volume of air that is placed in motion or disturbed. The amplitude of the motion would also enter into the intensity of the sound, I think. The larger the diaphragm the less amplitude of motion is required to produce a given total of acoustical power.

A baffle is a large reflecting surface set up around the vibrating member to prevent the passage of pressures or the flow of the pressures from the front of the vibrating member back to the rear and thus neutralizing the action and reducing the acoustical efficiency. To a certain extent the baffle increases the intensity of the sounds, and that is the purpose of a horn also.

The volume of sound given off by Def's. Ex. 7 was much less than in the case of Def's. Ex. 2. The power supplied to the magnetizing coil in the case of Def's. Ex. 2 was $4\frac{1}{2}$ watts and in the case of Def's. Ex. 7 was 18 watts. It should be admitted,

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certainly, that the efficiency of this Number 2 device as a sound producer, when you take the ratio of the energy put out as sound to the energy of the electrical current which feeds it, is much greater than the efficiency of Number 7.

No. 7 was built according to Lodge's specification as nearly as could be determined from the figures given in Fig. 5., the measurements given in Fig. 5 of *The Electrician* paper, and in order to energize that field of No. 7 with that sized wire it requires more energy than to energize the field of No. 2. That is due in part to the fact that Lodge shows such an extremely wide air gap between the pole pieces. The width of that gap is $\frac{3}{8}$ ths of an [185] inch, I believe. It is considerably greater than the width of the gap found in the Stewart-Warner device, Defs'. Ex. 2. Increasing the air gap in general increases the amount of current and windings or the number of ampere turns necessary to give you a given flux across the gap. With a large gap it would require more power to give you a given flux than would a small gap. I do not find anywhere in this so-called Lodge instrument, Defs'. Ex. 7, any means for accurately spacing the inner pole from the outer pole and maintaining their concentricity. Any special means for precise spacing are not evident. I do not find in the photograph Defs'. Ex. 9 any screws at the bottom such as are employed in the model Defs'. Ex. 7. As to whether or not the presence or absence of such screws would affect the

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alignment of the shell or casing with the inner pole, it would depend on the tightness of the fit with the bottom of the casing. If it were a loose fit then there would be likelihood of movement of the shell or casing with respect to the inner pole. By making the gap as wide as Lodge illustrates, the inner pole might become displaced with respect to the outer pole to some extent without any serious consequences. In Defs'. Ex. 2 I would say that the clearance between the inner surface of the coil and the central pole piece was of the order of between a 16th and a 32nd of an inch. That would allow a certain amount of displacement within that limit without seriously impairing the functioning of the apparatus, but nothing like as great a displacement is allowable in Exhibit 2 as would be in Exhibit 7. In Plff's. Ex. C, which is a drawing of a cross-section of Defs'. Ex. 2, I should say that the part marked "E" performed the function of accurately spacing the inner pole with respect to the outer pole and maintaining their concentricity. [186]

As to the reason why the diaphragm shown in Pridham and Jensen patent 1,448,279 is provided with corrugations or curves, I take it that the purpose of the corrugations is to prevent that blasting that we spoke of awhile ago; that is, to prevent the segmental vibration of the diaphragm. These corrugations in this type of diaphragm that we see in the Pridham and Jensen patent just mentioned, would permit of greater amplitude of movement

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than the ordinary flat diaphragm of the same weight of material and thickness. Such diaphragm would appear to give off self-sustaining sound waves in free air without the use of the top portion 2; but less efficiently than it would with the top portion and a horn. One only needs to put on the horn on the Magnavox speaker to see the greater output of sound that results from the action.

XQ. 188 In the same way that it is necessary to use the baffle on a loud speaker having a small-sized cone?

A. In much greater degree.

The statement is made somewhere in the Lodge article (referring to the form of device Defs'. Ex. 7) that it was necessary to hold the ear against the diaphragm. You must remember what Lodge was trying to do was to pick up very faint signals, telegraphic signals and also voice signals. I do not find any mention of voice signals there, but the general tenor of the article and of the patent implies he had voice signals in mind as well. Lodge was dealing with the inductive effects that are transmitted through space, and not wireless telephony in the sense of high frequency oscillations or radio frequency oscillations which we are talking about to-day. What Lodge was dealing with was not the Hertzian waves but these inductive actions transmitted through space from one electrical circuit to another. [187]

(Deposition of Paul E. Sabine.)

Redirect Examination by Mr. Wilkinson:

RDQ. 215 Will you outline the functional differences between a horn and a baffle as used with vibrating diaphragms?

A. The horn is essentially an impedance matching device. We have a small dense diaphragm vibrating in the free atmosphere. Due to the difference in the acoustic resistances of the diaphragm and the medium in which it vibrates, the energy that is radiated as sound waves will be small if there is no intermediate arrangement. The horn and the air chamber or sound box act as this intermediate transformer. At the diaphragm you have large pressure changes with not any great flow on movement of the medium and the function of the horn is to convert this available energy into relatively large movements of a much less dense medium over a larger area and the horn and sound box function in that way and quite similar to the impedance matching transformers that are used in electrical circuits. When you want to transfer energy from one circuit to another that energy is most efficiently transferred when the impedance of the two circuits are as nearly the same as you can get them.

Now the action of a baffle is different. The small diaphragm, let us say, is moving to the right. The pulse of condensation starts from the right side of that diaphragm. At the same time a pulse of rarefaction starts from the left hand side of that dia-

(Deposition of Paul E. Sabine.)

phragm. The rarefaction phase through diffraction is carried around to the right hand side of the diaphragm and will tend to neutralize the compression that is set up by the motion from left to right. Similarly, when the diaphragm is moving to the left it will start a rarefaction phase on the right side of the diaphragm and a compression phase on the left side and through diffraction these two will tend to neutralize each other so that the energy which is radiated from the small diaphragm under these [188] conditions will be small. Now, if we use a baffle, which is nothing more or less than a barrier, around the diaphragm, these two portions of the sound wave that is generated—and we must remember that sound waves are generated from both sides of the diaphragm if the diaphragm is in free space—cannot interfere destructively with each other without passing around the edges of the barrier. In other words, the baffle separates the waves generated from the two faces of the diaphragm so that they do not interfere destructively.

Sound modifiers may be of three sorts, reflectors, horns and resonators. The horn operates, as has been indicated, as an impedance matching device. The baffle acts as a barrier and a reflector. The reflecting function, of course, is present in horns, and we can think of a baffle if we like or we can speak, if you please, of a baffle as a horn of zero length, which is meaningless and simply a confusion of terms.

(Deposition of Paul E. Sabine.)

RDQ. 216 Please state whether or not the differences you have pointed out as between the horn and a baffle exist as between the Pridham and Jensen device as exemplified by Defs'. Ex. 1, when provided with a horn, and defendants' device as exemplified by Defs'. Ex. 2 when provided with a baffle around the larger diameter of the cone.

A. I would say yes.

RDQ. 217. Is there, in your opinion, any feature in the cone with a baffle around it that is functionally equivalent to the sound box in the diaphragm, sound box and horn type of speaker?

A. I can find no equivalent of the sound box in the cone with the baffle.

RDQ. 218. Referring to Pridham and Jensen patent No. 1,579,392, what is therein illustrated as the means for concentrically spacing the inner pole piece F with relation to the outer [189] pole piece C?

A. In line 60 of the Specifications it is stated:

“We first gauge the cylinder and then place the core F therein and center it by means of a spacing disk 10 of insulating material.”

“10” would seem to be the spoolhead of the coil.

RDQ. 219. How does the upper head of the spool, as shown in the enlarged photograph, Defs'. Ex. 9, of the Lodge device, Defs'. Ex. 7, compare as a spacing means having concentrically located the inner and outer pole pieces with the disk 10 in the said Pridham and Jensen patent?

A. Well, I see no difference.

(Deposition of Paul E. Sabine.)

Recross-Examination by Mr. Loftus:

In stating that the spacing disk 10 in Pridham and Jensen patent 1,579,392 is the head of a spool, I made that statement because it looks that way. It is described in the patent as a spacing disk, not as a spool head; but it seems to me to be both. In the Lodge device shown in Fig. 7, Institute of Electrical Engineers, the disk on top of the magnetizing coil is obviously the spool head. In Fig. 7 it fits loosely into the casing or shell, but I am not sure about Fig. 5. In the article in "The Electrician" I would not be prepared to go on record as to whether it is intended to be a tight fit or not in Fig. 5 of the article in "The Electrician." If it were a tight fit it would function as a spacing disk.

The presence of a baffle does increase the acoustical load of the diaphragm, particularly at low frequencies; but the presence of a baffle is a much less important factor in the operation of a cone diaphragm, practically speaking, than is the presence of a horn. It is a matter of degree, but the degree is so large that it becomes almost a matter of kind. [190]

By stipulation, copy of the deposition of Ernest F. Dechow, taken in the case of Magnavox v. Hart & Reno, No. 2534, was offered in evidence, said deposition being as follows: [191]

DEPOSITION OF ERNEST F. DECHOW

a witness on behalf of defendants.

Direct Examination by Mr. Wilkinson:

My name is Ernest F. Dechow. My residence is at 2934 North Sacramento Avenue, Chicago, Illinois. I have been in the electrical business for 26 years, doing enunciator maintenance work.

I know a man named John J. Comer as the man who built the enunciator system for the Automatic Electric Co. I became connected with that company in 1908.

Q. 13. And did the Automatic Electric Company, while you were connected with it, have anything to do with enunciators?

A. Yes, sir.

Q. 14 With what enunciators?

A. That is the automatic enunciator made by Comer.

Q. 15 Did you personally have anything to do with this Comer enunciator?

Mr. LOFTUS: This line of examination is objected to if it has to do with any effort to show anticipation by Comer or Automatic Electric Company on the ground of lack of notice.

Mr. WILKINSON: The testimony of this witness and any exhibits which may be identified by him are offered for the purpose of showing the state of the art and hence need not be pleaded.

Mr. LOFTUS: I do not understand that the privilege of showing the state of the art goes so far as to permit the witness to testify to any prior uses

(Deposition of Ernest F. Dechow.)

or practices where the same have not been set up in the answer, and the objection is repeated.

A. I did. I had charge of the development and manufacturing of it.

Q. 17 I call your attention to Figure 8 of Comer patent No. 1,137,186, dated April 27, 1915, and ask if you understand the [192] device shown in that figure?

Mr. LOFTUS: May it be understood that my objection applies to all of this testimony?

Mr. WILKINSON: It may be so understood.

A. Yes, I understand that thoroughly.

In the Comer enunciators that I have referred to like that shown in Fig. 8 of that Comer patent, it was in 1911 that Automatic Electric Company commenced making the said Comer devices like that shown in Figure 8 of the Comer patent. The device you have produced is one of the old type we called the 11077 reproducer. This particular one is one of the old White Sox Chicago, Comiskey Ball Park speakers.

The extent to which the Comer enunciators were made and installed of the type, for instance, that I have identified is something I couldn't say offhand, but I know we made approximately 50,000 of them at that time, the orders were about 50,000; they went all over the country. Here are some of the places where the Comer enunciators were installed, say as early as 1915: D. B. Fisk & Co. is one place, I just happened to think we overhauled it the

(Deposition of Ernest F. Dechow.)

other day; that was installed in 1912. The White Sox Ball Park was installed in 1913. The Automatic Electric Company was installed in 1911. Those installations I have referred to are all devices such as I hold in my hand; the mechanism was all the same excepting a few changes in the mounting and things of that kind.

Q. 30 Will you just give a brief description of how that enunciator in your hand operates and in doing so, if you desire you can refer to drawing Figure 8 in the Comer patent No. 1,137,186.

A. Well, to begin with, starting from the bottom, of course, I am not very good on explaining these things, we have a perman- [193] ent magnet and an energizing coil. The current passing through the coil energizes the floating armature linked to the mica diaphragm and placed between two gaskets in the sound box, and of course a horn put on the end of this box completes the outfit.

When the current is received in the coil marked *a'* in Figure 8 of the drawing of said Comer patent it energizes the floating armature which is linked to the diaphragm which produces the sound.

(Mr. WILKINSON: A copy of the Comer patent No. 1,137,186, granted April 27, 1915, on an application filed October 24, 1910, is offered in evidence as Defs'. Ex. 37.)

Mr. LOFTUS: Objected to on the ground of lack of notice.

(The exhibit was so marked.)

(Mr. WILKINSON: The enunciator device

(Deposition of Ernest F. Dechow.)

produced by the witness is also offered in evidence as Defs'. Ex. 38.)

Mr. LOFTUS: Same objection.

(The exhibit was so marked.)

Mr. WILKINSON: Direct examination closed.

Mr. LOFTUS: No cross-examination.

Which were all of the proceedings had at the time and place above indicated. (Notarial certificate of Alice M. Rankin attached.) [194]

Defendant offered in evidence copy of patent to J. J. Comer, No. 1,137,186, dated April 27, 1915, being the one referred to in the Dechow deposition; and the same was marked Defs'. Ex. D.D.

By stipulation, copy of the deposition of Clair L. Farrand, taken in the case of Magnavox v. Hart & Reno, No. 2534, was offered in evidence; and in connection therewith a copy of the patent referred to therein, being British Patent 178,862, granted to Clair L. Farrand, was offered. Said patent copy was marked Defs'. Ex. EE. The Farrand deposition follows: [195]

DEPOSITION OF CLAIR L. FARRAND
on behalf of defendants.

(New York, Oct. 6, 1931)

Direct Examination by Mr. Hodgkins:

My name is Clair L. Farrand. My address is Larchmount, New York. I am president of United

(Deposition of Clair L. Farrand.)

Research Corporation, an engineering and research company engaged in electrical and acoustical work. Before that I was president of the Farrand Manufacturing Co., Inc., a company which commenced the manufacturing of radio loudspeakers in 1924, and was in operation in 1929, when it was sold to the Brunswick-Balke-Collender Company. In 1921 I manufactured a so-called Phonetron loudspeaker. This was a moving coil driven cone type loudspeaker and was sold in moderate quantities for radio amateur uses, as this was prior to the days of the broadcasting reception. I am the patentee of British Patent No. 178,862 granted to Clair Loring Farrand.

(Mr. HODGKINS: This photostat copy of a patent is offered in evidence as Defs'. Ex. 39.)

Mr. LOFTUS: Objected to as incompetent, irrelevant and immaterial, and on the ground that it is later than the filing date of the first patent in the suit, and if offered as anticipatory of the second patent in suit, is objected to on the ground of lack of notice.

Q. 8 Will you please state briefly any points of difference or similarity between the structure shown in this patent and that which you stated you marketed in 1921 under the name of Phonetron.

Mr. LOFTUS: That is objected to as calling for secondary evidence; if such devices were made, they should be produced here or their absence explained.

(Deposition of Clair L. Farrand.)

A. The structure shown in this patent is practically [196] identical with the structure marketed by me in 1921. The only difference I see is in the method of fastening the spider support of the cone to the central magnetic pot. The term used to describe this type of speaker is the word "dynamic". It is an abbreviation of the technical term electrodynamic.

A dynamic speaker, as I understand, comprises a conical diaphragm of rather large size, acting directly upon unconfined air and made of light material, supported at its outer edge with a flexible support in an opening in some supporting structure.

Mounted on the center of the conical diaphragm is a voice coil, which floats in a long annular gap, wherein there is a unidirectional magnetic field produced by a field winding which in turn is energized from a separate source. The voice coil is energized by the audio voice frequency currents received from the associated amplifier tubes. The diaphragm is generally supported in a baffle, which may conveniently be an opening in one wall of a radio cabinet.

I have examined Plf's. Ex. C, which is a photostat showing the cross section of the Stewart-Warner loudspeaker complained of in the present suit and understand the construction as shown in the drawing.

I am generally familiar with the horn type loud-

(Deposition of Clair L. Farrand.)

speakers of the sound box and diaphragm type which were on the market for many years. The General Electric Company, Radio Corporation and Westinghouse Companies marketed speakers of that type for radio broadcast reception but they are not being marketed now. The reason they are not being marketed is that it is possible to obtain a superior musical reproduction with the dynamic type loudspeaker.

I am familiar with the differences in construction and [197] principle of operation of the dynamic cone type loudspeaker and the sound box diaphragm and the horn type of loudspeaker. The differences are these: The sound box and horn type loudspeaker comprises an actuating motor element generally fastened to a small flat diaphragm which forms one wall of an enclosed chamber called a sound box. The opposite wall of this chamber has a small opening, to which is fastened the throat of a horn. The walls of the horn taper outwardly to a bell-like opening, the size of which is dependent upon the lowest tone it is desired to reproduce. The action of this device is that the diaphragm moving small distances compresses the air in the chamber of the sound box to a very high degree of compression. This high compression wave is applied to the throat of the horn and expands outward toward the bell-like opening, and as it expands outwardly its pressure is reduced, due to the increasing area, until when it arrives at the opening of the horn it is a relatively low pressure air wave.

(Deposition of Clair L. Farrand.)

On the other hand, the dynamic type loudspeaker does not employ the horn. The conical diaphragm operates directly on the air at approximately the same pressure as is arrived at at the bell opening of the horn in the case of the sound box-horn combination. The magnetic motor element fastened to the center of the cone displaces the conical diaphragm, compresses the air adjacent to it in a relatively large volume, requiring considerable displacement. The low pressure air wave expands outward directly, being unconfined to the listener. A baffle is usually associated with this type of diaphragm to prevent the intermingling of the air wave produced on the concave side of the cone with the air wave produced on the convex side of the cone. This intermingling and cancellation thereby produced is most pronounced at the lower or bass tones, which are waves of relatively long length. The [198] diaphragm is sufficient to separate the shorter waves of the higher frequencies.

The amplitude of the movement of the diaphragm of the sound box-horn combination is very much smaller than the motion of the cone diaphragm of the dynamic speaker. The former, for an equal intensity of sound, may, for instance, move a maximum distance of five-thousandths of an inch to ten-thousandths of an inch, whereas the conical diaphragm of the dynamic speaker would for the same intensity of sound move ten or twenty times that, that is, approximately one-tenth inch.

(Deposition of Clair L. Farrand.)

The speaker of Plf's. Ex. C does not contain a sound box. It does have a conical diaphragm, and from its design is for use directly upon unconfined air without the use of a horn. Sound boxes generally are used with horns. This construction of Plf's. Ex. C is then a dynamic cone type speaker such as I have described. The first dynamic cone type speaker on the market prior to June, 1927, was the Phonetron, which I have described, and is illustrated in British patent 178,862, which was marketed in 1921. A loudspeaker of this type was model 104, manufactured by the General Electric Company and Westinghouse Electric and Manufacturing Company for the Radio Corporation of America, and sold by them as the Radiola models, and also sold by the Victor Talking Machine Company and the Brunswick-Balke-Collender Company. This RCA 104 was marketed commencing in 1925. This is a drawing of the Radiola RCA 104 speaker.

(Mr. HODGKINS: This photostat is offered in evidence as Defs'. Ex. 40.)

Mr. LOFTUS: Objected to as secondary and not the best evidence. If any such devices were constructed and placed upon the market, it would seem that physical models thereof should [199] now be available. Moreover, there was no foundation laid for the introduction of a drawing of this character.

There were other cone type loudspeakers for radio use sold prior to June, 1927, of the so-called magnetic drive type. They were manufactured by the

(Deposition of Clair L. Farrand.)

Western Electric Company and Farrand Manufacturing Company, and several other manufacturers, and consisted of both double cones and single cone driven by magnetic type driving motors. The cone type speaker has displaced the sound box and horn type, due to the fact that you can obtain a more faithful musical reproduction with the cone itself, and also with the cone and an associated moving coil drive than can be obtained with the sound box and horn, when the latter is built to a convenient commercial size. This difference in reproduction is particularly noticeable in the quality of the bass reproduction, being more faithful, and also that the musical range of reproduction is more extensive than when the sound is produced by the sound box-horn combination.

In 1922 broadcasting started to such an extent that it was available to the public in general for home reception on broadcast receivers. Loudspeakers were in use prior to 1922. I recall one installation prior to 1915 in the waiting room of the Grand Central Station in New York City of sound box and horn combinations which were installed there for train annunciation. I am quite sure they were not Magnavox loudspeakers.

Q. 35 I call your attention to the fact that the Pridham et al. patent 1,448,279, which is one of the patents in suit, contains in lines 102 on page 1 and following over to the top of page 2 a statement as to the depth of the air gap in which it states:

(Deposition of Clair L. Farrand.)

“Thus the depth of the air gap for maximum efficiency cannot be more than one-quarter of the diameter of the central pole, as the area of the cylinder equals the cross section of the cylinder when the latitude of the cylinder is equal to one-fourth its diameter;” [200]

Will you state whether or not you agree that this is a correct statement as to the requirement in a dynamic phone type speaker?

A. I do not think it is correct to say this is a specific limitation of design of a dynamic speaker. It merely is a statement which, as I see it, gives the minimum weight of iron if one had only to consider the magnitude of flux density at the gap and no other considerations were involved. The design of a dynamic speaker for maximum efficiency is quite a complex problem and depends on many other factors in addition to flux density for maximum efficiency.

In the dynamic type cone speakers which my company manufactured we did not use anything in the nature of a spacing ring mounted upon the pole piece.

Q. 37 Did you have any difficulty with maintaining proper spacing in shipping and handling your speakers.

Mr. LOFTUS: That is objected to as an attempt to show lack of utility in the subject matter of the patent in suit, which defense is not open to these defendants in view of the fact that they are using such spacing means.

(Deposition of Clair L. Farrand.)

A. We did not. To my knowledge the RCA 104 speakers produced and distributed in 1925 were satisfactory in operation. They were very widely used.

The dynamic cone type speakers which were made by the Farrand Company from 1924 to 1929 we thought were satisfactory. During those years 1924 or 1925 we made approximately between 50,000 and 100,000 speakers. [201]

Cross Examination by Mr. Loftus:

In this British patent of mine, Defs'. Ex. 39, the actuating mechanism in Fig. 1 is the so-called magnetic type drive. The difference between the magnetic type drive and the dynamic drive, is that in the former the moving element is a piece of iron, indicated by the letter *j*, which is actuated through its association with the poles *k-k*, around which are wound coils *m-m*. The poles are magnetized by a permanent magnet.

The dynamic type drive utilizes as an actuating element—referring to Fig. 2 of the same patent—a moving coil *M*, large, placed in an annular field between the center pole piece *g* and the plate *s*. A uni-directional field is produced across this annular gap by energizing the winding *W* large. The advantage of the so-called dynamic drive over the so-called magnetic drive is that the dynamic drive is capable of handling larger powers, and also of moving the cone to larger displacements, without distortion.

XQ. 5 What about the factor of the restoring

(Deposition of Clair L. Farrand.)

force of the moving member of the actuating device?

A. The restoring force of the actuating device is a little different in the two cases. I might add that the form of magnetic drive commonly used, referred to in my previous testimony, employed a different magnetic structure than that shown in Fig. 1. It was of the so-called balanced armature type wherein the moving element, that is, the iron armature, was associated between two pairs of poles in such a way that it was normally balanced as to the magnetic pull and was maintained in this balanced condition by means of a spring of just sufficient power to so retain it. This is a slight restoring force to the structure as a whole, whereas the dynamic type drive, as shown in Fig. 2, did not have an additional restoring [202] force associated with the coil. However, the dynamic speaker, as manufactured, had a slight restoring force associated with the moving coil in the form of a coil support. This is shown on the sketch of the Radiola 104.

XQ. 6. What about the matter of the indirect connection between the actuating member j and the diaphragm in the case of the magnetic drive, and the direct connection between the moving coil and the diaphragm which is ordinarily employed in a dynamic type drive?

A. The connection usually employed with the magnetic drive involved a lever to increase the amplitude of motion of the armature when applied to the apex of its cone; the dynamic drive did not use this lever to increase the motion.

(Deposition of Clair L. Farrand.)

XQ. 7. Did not that leverage connection manifest itself in some sort of objectionable tones or sounds in the case of the magnetic drive?

A. Yes, it was one of the features which limited the power which the magnetic drive would handle.

XQ. 8. I was referring more to the matter of harmonics.

A. I believe it was constructed in some designs so that it introduced objectionable resonances, but this feature, however, was not inherent, and in some designs was placed at such points in the musical spectrum as to be unobjectionable.

XQ. 9. And yet that type of drive, known as the magnetic, has practically disappeared from the market, has it not, in this country, at least?

A. Yes, the dynamic type speaker has practically replaced it.

My understanding of the word "dynamic" as applied to loud speakers is that there should be a large conical diaphragm operating in free air. The Pridham and Jensen patent 1,448,279 presupposes a receiver of the electrodynamic type. I would not apply the term "dynamic" or "electrodynamic" to a speaker of the [203] moving coil type wherein a horn was employed. I do not think that the word "dynamic" or "electrodynamic" describes any particular element of the speaker. It is a term which in physics means power or force, and has been used and is now used to describe one thing, that is, a conical diaphragm with moving coil drive. I first heard of the Magnavox loud speaker about 1917, and

(Deposition of Clair L. Farrand.)

had one in my possession about 1919. At or about that time I heard of the word "electrodynamic" applied to that type of speaker. "Electrodynamic" and "dynamic" are words used in physics when describing loud speakers. The word "dynamic" was first used to describe the moving coil driven cone around 1925 to 1927, and later manufacturers changed their designations to "electrodynamic", I believe, as they were afraid that Magnavox had some trade mark rights on the term. The demand for loud speakers prior to the advent of broadcasting was very small. There was a demand in connection with public-address work, but I would not call it considerable in comparison with our present-day ideas of production. I would call it very small.

XQ. 66. When you say that the cone diaphragm of large size not using the horn is superior to a smaller diaphragm using the horn, have you considered the matter of the so-called exponential horn?

A. Yes, the exponential horn to reproduce the lower tones must have a relatively large length, and such a large opening that they would not be of convenient size to use in the normal home for purposes of radio reception.

XQ. 67. But where space or appearance is not a factor, such a horn does produce tones and ranges and volume superior to the large cone, does it not?

A. No, not nearly as well.

XQ. 68. How do you account for the extensive use of the horn in connection with loudspeakers

(Deposition of Clair L. Farrand.)

employed for talking motion [204] picture purposes?

A. It is rather difficult to account for its continued use by Western Electric Company, after the use by the R.C.A. Photophone Corporation of the large conical diaphragm for talking picture reproduction, as the latter, in my opinion, is much improved reproduction.

XQ. 69. At the present time, have you any idea as to the percentage of loudspeakers using horns and those using the large cone in the talking picture industry?

A. I believe that the use of large horns exceeds, in quantity, the use of moving coil-driven cones, but feel that it is due to the fact that the horn was the device first chosen, rather than due to its excellence or superiority of operation.

XQ. 70. In your work here with Warner Brothers Picture Company, which type do you use, the horn or the large cone?

A. We are confining ourselves to coil-driven cones, as we have determined that they produce a superior quality of reproduction.

XQ. 71. But the Warner Brothers have used and still use the horn, do they not?

A. Warner Brothers are a licensee of Electrical Research Products, and the large horn is the only model available to them through that license.

XQ. 72. You say that in the so-called sound box or horn type, the sound waves are compressed; now,

(Deposition of Clair L. Farrand.)

is this not also true of the large cone mounted in a baffle?

A. What I was referring to when I spoke of compression of the air was that in the sound box-horn combination the small displacement of the diaphragm created a very large air pressure which required transformation through the horn to a low pressure and emitted as a sound wave. The moving coil-driven cone, however, initiates the sound wave by means of the air at low compression, and does not require the transformation by means of a horn. [205]

XQ. 73. This compression, nevertheless, takes place where a baffle surrounds the cone, does it not?

A. It takes place whether or not the baffle does surround the cone, and is essential for the reproduction of sound. The difference between the sound-box-horn combination and the moving coil-driven cone is, as far as pressure goes, the magnitude of the original pressure in the vicinity of the diaphragm.

XQ. 74. Have you ever observed that where a relatively large cone is employed without a baffle, its amplitude of movement is generally greater than when a baffle surrounds the cone?

A. The amplitude of movement of a cone with or without the baffle at the higher frequencies is substantially the same.

XQ. 75. Well, tell us about the lower frequencies.

A. At the lower frequencies the amplitude of

(Deposition of Clair L. Farrand.)

motion in general increases both with and without a baffle; that is, in comparison with the amplitude of movement in the higher frequencies. This is essential to radiate the lower frequencies in proportion with the higher frequencies; and when the baffle is omitted, as I described before in my testimony, the sound wave, the compression wave from the concave side of the cone circulates and intermingles with the compression wave in the convex side of the cone, and a cancellation results, which practically means that the air is circulated at the extremely lower frequencies from one side of the diaphragm to the other. This results in a larger motion, as you do not get a loading effect on the diaphragm, at frequencies, we will say, of 100 cycles and below that, than you get when you place the diaphragm in a baffle and separate these two waves and prevent their cancellation.

XQ. 76. So that the presence of a baffle does produce this loading effect on the cone or diaphragm?

A. Yes, at extreme low frequencies. [206]

XQ. 77. Then it is not strictly correct to say that the cone is operating in free air, is it?

A. I think it is. Both sides of the diaphragm may be, and generally one side is exposed to as free air as is possible to obtain.

XQ. 78. You recognize the fact that there are many authorities who disagree with you on that point, do you not?

A. I do not think that there is a general disagreement on that.

(Deposition of Clair L. Farrand.)

XQ. 79. These are the same theories that you expounded in that same case of Lektophone against Rola as to the operation of the cone?

A. I don't recall that I expounded them in that case, but I have been associated with this art for many years and the theories I have given seem to be generally accepted and sound.

XQ. 80. Referring to this drawing, Def's. Ex. 40, you have never checked that drawing with an actual Radiola of R.C.A. 104, have you?

A. My recollection is that I checked this drawing at the time of the Magnavox against Thompson suit on the Majestic loudspeaker. It is generally of the size, proportion and design of the Radiola 104, as I am quite familiar with the structure of that device.

XQ. 81. The statement appearing in Pridham and Jensen patent 1,448,279, to which your attention was called on direct examination, namely, "Thus the depth of the air gap for maximum efficiency can not be more than one-quarter of the diameter of the center pole," et cetera, is substantially correct in so far as any statement may be made to cover conditions in general, is it not?

A. I would not say that it covers conditions in general; it merely means that when the section of the air gap equals the cross-section of the central pole that the iron in both places is worked at the same density. I do not consider this an essential relation for maximum efficiency of a loudspeaker,

(Deposition of Clair L. Farrand.)

as in some cases you really require more or less iron in either place.

XQ. 82. Well, there is nothing inaccurate in that statement, is there?

A. No, it shows a general understanding of the design of a magnetic system. [207]

XQ. 83 What was the first loud speaker of the moving coil type that you actually saw in existence or upon the market?

A. The first loudspeaker of the moving coil type I saw on the market was a Magnavox sound-box-horn combination. [208]

Redirect Examination by Mr. Hodgkins:

The Phonetron produced by me and sold in 1921 was the first loudspeaker of the voice coil type and of the cone type which I first saw in actual operation. The first cone-type voice coil speaker which I saw in commercial production after broadcasting became general was the Radiola 104.

Recross Examination by Mr. Loftus:

RXQ. 84 In your direct examination you made frequent reference to a small flat diaphragm. Have you observed that the diaphragm illustrated in Pridham and Jensen Patent 1,448,279 is not a flat diaphragm?

A. It is a flat diaphragm, in which there are stamped some circular corrugations. I would say it is of the flat diaphragm type, and departs from it only in that regard.

(Deposition of Clair L. Farrand.)

RXQ. 85 What would be the purpose or effect of those corrugations or curves in the diaphragm illustrated in said patent?

A. Circular corrugations have been generally used in flat diaphragms in the telephone art to prevent the diaphragm breaking up into what are known as Chladni patterns.

RXQ. 86 Doesn't it also permit a greater amplitude of motion in the diaphragm?

A. It permits a slightly greater amplitude of motion, but diaphragms of this character as used [209] in the early Magnavox speakers were inherently very stiff in comparison with the present-day dynamic structures.

RXQ. 87 Had you noticed that the Pridham and Jensen patent referred to describes the diaphragm as a flexible diaphragm?

A. I imagine it would be so described, as all flat diaphragms are flexible and depend upon this flexibility to produce the high compression sound wave in the chamber.

RXQ. 88 Do you know of any reason why a diaphragm made substantially like that shown in the Pridham and Jensen patent 1,448,279 would not operate to give off what you have in the past called self-sustaining sound waves in the free air if the horn and the top of the so-called sound box were removed?

A. If the top of the sound box were removed in the disclosure of the Pridham-Jensen patent and the

(Deposition of Clair L. Farrand.)

diaphragm exposed to free air, it would make a noise, and sound waves, but would not be a device which in any way should be commercial or useful, as the requirements of loudspeakers are interpreted.

RXQ. 89 What is the smallest diameter cone diaphragm that you have observed in commercial use in connection with loudspeakers?

A. They vary somewhat, but approximately six inches in diameter is the smallest that is in general commercial use.

RXQ. 90 Now, in connection with the so-called midget sets, you have seen some that are as small as three and a half or four inches in diameter, have you not?

A. I do not recall seeing any quite as small as that; there have been some small ones made, but they lose markedly in their quality of reproduction.

RXQ. 91 There was one period in your career as the champion of the Hopkins patents, when you thought that a cone less than nine inches in diameter would not operate satisfactorily, was there not?

A. It has to do with intrepation as such. This is a [210] matter of degree, and generally if the cone is reduced in size, a loss in quality of reproduction is suffered. I still believe and know from actual tests that the larger the cone up to approximately twelve inches or so, the better the reproduction, and as the cone is reduced in size to three or four inches in diameter, the reproduction becomes relatively very poor.

(Deposition of Clair L. Farrand.)

Redirect Examination by Mr. Hodgkins:

RDQ. 44 Referring again to the Pridham et al. patent 1,448,279, if, as was asked on recross examination, the top of the sound box and horn were removed, would the diaphragm then be in free air as regards both sides of the diaphragm?

A. No, there still would be a chamber enclosed on the side of the diaphragm toward the voice coil.

RDQ. 45 Do the circumferential corrugations in the diaphragm of this patent cause the diaphragm to become a cone?

A. No.

Recross Examination by Mr. Loftus:

RXQ. 92 In one of your later answers you said that there would still be a closed chamber on the side of the diaphragm towards the moving coil, you then referred to patent 1,448,279, but that is not true of patent 1,579,392, which is also here in suit, is it?

A. That would not be the case if the drawing means to convey that the spacers surrounding these screws 20 are cylindrical and separate from each other; then the diaphragm would have a small annular enclosure on the side towards the voice coil and an opening of several inches in diameter.

(Notarial certificate of Arthur C. Smith attached). [211]

A copy of the drawing of the R. C. A. Speaker Number 104, referred to in the Farrand deposition, was offered in evidence, and the same was

(Deposition of Clair L. Farrand.)

marked Defs'. Ex. FF. Defendant offered in evidence certified copy fo the Patent Office record in the matter of Interference between Valentine Ford Greaves, assignor to The Magnavox Company vs. Edward W. Kellogg. The same was objected to on the ground that it was immaterial, as it related to matters occurring long after the dates of the patents in suit, and as needlessly encumbering the record. (Objection overruled and exception noted.)

The document was marked Defs'. Ex. GG. Defendants reoffered in evidence the device of the Kellogg publication previously marked Defs'. Ex. CC. The same was objected to as immaterial, and as relating to matters occurring long after the dates of the patents in suit, and as needlessly encumbering the record. (Objection overruled and exception noted.)

The document was received as a formal exhibit and marked Defs'. Ex. CC. Defendants offered in evidence as a single exhibit Patents 1,051,113 to Pridham and Jensen, January 21, 1913; 1,088,283, February 24, 1914; and 1,105,924, August 4, 1914; and the same were marked Defs'. Ex. HH. Defendants offered in evidence the so-called "Blue Book" entitled "Pictorial Digest of the Art," and the same was objected to as mere argument, and objection sustained. [212]

EDWIN S. PRIDHAM,

Recalled for Plaintiff in Rebuttal.

Direct Examination by Mr. Loftus:

Q. Will you briefly explain the developments leading up to the invention of the two patents in suit?

Mr. MILLER: I object to that, your Honor, as not proper rebuttal. That is a part of his prima facie case.

The COURT: The objection is overruled; exception.

A. I have been connected with the art of communication, especially electrical communication, for 35 years, being employed by the Western Electric, the Chicago Telephone Company, and other telephone companies. I am a graduate of Stanford University, Department of Physics, 1909. I was employed by the Poulsen Wireless Telegraph Company in 1910, where I met Mr. Jensen, who is co-inventor with me in these patents. We were sent to Europe to study the wireless companies and the methods of operation in 1910. In 1911 there was formed the Commercial Wireless & Development Company by some San Francisco men, among whom were Mr. Richard O'Connor, Matt I. Sullivan, and others. We established a laboratory in Napa in 1911 for the purpose of undertaking a study of the reproduction of radio impulses and general problems in communication. While there we made a very interesting discovery of the effect of tele-

(Testimony of Edwin S. Pridham.)

phonic currents on a conductor when disposed in a magnetic field. This was a very crude device. It consisted of a single wire stretched in a magnetic field, connected to a very large diaphragm, although it produced the voice rather weak, we continued our experiments along this line, gradually improving this device in 1913 and 1914 on telephone lines. In the Fall of 1914 we took this instrument to New York City and talked from New York to Denver without the assistance of amplifiers, Pupin coils, or other apparatus to strengthen the currents, showing very conclusively that our [213] apparatus was very successful in telephone reproduction. The problems that we had to attack were various, and were very difficult of solution. It took quite a bit of time; we had several mechanics; it took quite a bit of money. We ran very short of money, and times were exceedingly hard for us, but we had an idea in our minds that we would run onto a very successful telephone reproducer; and although we were very greatly in debt and really had a very difficult time to get along, we kept at our work. One evening I called Mr. O'Connor up from the laboratory and told him we were 4 or 5 months behind in our bills, the mechanics had not been paid. He said, "Well, young fellow, times are tough; hardly anyone has got any money now; you have not produced a successful instrument." I told him then that we had just produced a very successful loud-speaking telephone.

(Testimony of Edwin S. Pridham.)

It rather interested him immediately to think that we had produced something that would be commercially successful. He said that he would send his son Charlie up to hear this instrument. When Charlie came up on the next Sunday we had this instrument arranged on the roof of the house, on the chimney. A very large horn was connected to the instrument. The voice was propelled through the air for a distance of 4 miles. At night in the Napa Valley records played on a phonograph could be heard throughout the Napa Valley, a distance of 9 or 10 miles. It created a very great sensation. Lieutenant-Commander Sweet, who had charge of radio work at Mare Island, came up to the laboratory and was much impressed with this loudspeaking telephone, because it was exceedingly loud. We were invited by the Exposition officials to give demonstrations at the Exposition from the Tower of Jewels. The reproduction from these instruments could be heard out on the battleships in the Bay, and in fact, the sailors even danced on the decks to the music. We gave a very important [214] demonstration at the dedication of the City Hall in 1915. Mayor Rolph and other important men spoke to a crowd of over 50,000 people gathered there. Alice Gentle sang national airs over the instrument. There was a great deal of interest, both local and national. The Navy at that time was interested in docking vessels by means of our instruments. They ordered some instruments, and

(Testimony of Edwin S. Pridham.)

vessels were docked at the Bremerton Navy Yard very successfully. During all of these demonstrations we had one very great difficulty, the vibration of the coil in the magnetic field was very intense. That coil was wound with a fine wire in order to expose a great length of wire to the effect of the magnetic field. When these fine wires were brought directly out to the operating circuit we had trouble with the wires crystallizing and breaking off. That was a very great and serious difficulty for us. We finally solved this difficulty by the ingenious method of connecting the operating circuit wires to the coil, where the coil wires were attached to the diaphragm. This completely obviated any danger of the breaking of the wires. This method and means has been used ever since in practically all dynamic speakers to date.

Q. In what form, referring to this diaphragm forming a part of Defs'. Ex. A?

A. This connection on this diaphragm simply was one form of connection which we used to the coil of the magnetic field. The proposition was simply this, to attach wires of the operating circuit to the fine wires of the coil where the fine wires were attached to the diaphragm. Thus the fine wires would flex with the diaphragm. It was not at all necessary, neither did we always connect the operating circuit wires to the diaphragm with glue; many times we used a tinsel wire which was brought

(Testimony of Edwin S. Pridham.)

right off from the fastening means for the coil to the diaphragm. [215]

Q. Is that illustrated anywhere in any of your patents?

A. Yes. I would like to call your attention, in Patent No. 1,266,988, in Fig. 10 of that patent, the wires which are shown there as No 27 are not connected to the diaphragm throughout its length; it is connected at the center of the diaphragm where the coil wires of the diaphragm are connected. The claim simply says: "A vibrating conducting coil for the telephonic currents disposed in said field, and rigidly secured to the diaphragm and connections between said coil and the operating circuit, comprising thin metallic strips secured to the diaphragm." Now, in another patent in which we use exactly the same instrument, that patent being No. 1,329,928—

Mr. MILLER: I object to that, your Honor; that patent is not sued on.

Mr. LOFTUS: It is just to illustrate the testimony.

The COURT: You may proceed. It is for the purpose of illustrating the testimony, Mr. Miller.

A. In that case, in Fig. 10 we show the wire of the operating circuit as not connected throughout its length to the diaphragm, but simply leading from the center of the diaphragm where the coil is connected from the diaphragm to the operating circuit. We did not intend at any time to limit ourselves—

(Testimony of Edwin S. Pridham.)

Mr. MILLER: I object, your Honor, as to what he intended to do. That is to be gathered from the patent.

The COURT: Objection overruled.

Mr MILLER: Exception

A. We did not intend at any time to limit ourselves solely to gluing this strip to the diaphragm throughout its length to the periphery or a point near the periphery. We did use that many times, in thousands of our instruments, but we also used the other method of connecting the operating wires to the conducting coil in many hundreds of thousands of instruments that we made. At all times this method of conducting the movable coil which was disposed [216] in the magnetic field to the operating circuit simply consisted of connecting the operating circuit wires to the fine wire of the movable coil at a point on the diaphragm so that the anchoring point, you might say, of the connection would flex with the diaphragm, and consequently the wires would not crystallize and break. In this manner we solved the difficulties. I might say it has been exceedingly successful.

Mr. LOFTUS: Q. After this first device that you speak of, that is, the attaching of the lead-out wires to the diaphragm, what further occurred in connection with the development of the loud speaker?

A. After giving these matters considerable thought and solving this problem of the breaking

(Testimony of Edwin S. Pridham.)

of the wires, we thought we had at last arrived at a very successful loudspeaker. This was in 1915 and 1916 that this particular action happened. However, we were very far from a successful instrument in the matter of shipping the instruments abroad, and having them handled by the public. We worked, you might say, day and night on this problem. The first flush of victory, you might say, was over. The people who were backing the company began to be a little tired of not having any commercial success. It spurred us on more and more to finally arrive at a successful instrument. I remember well at that time both Mr. Jensen and I were very hard-pressed. We simply had to have something to get a real commercial instrument that could be sold in quantities. It was a very difficult matter to find a solution for this. We had very good friends at Mare Island. They suggested using these instruments in aeroplanes. The country at that time was getting ready for the war. Lieutenant-Commander Sweet especially thought that the "Magnavox", which we had called these instruments, could be used in aeroplanes for communication. We installed several in planes, at the risk of our lives, you [217] might say. Confusion was simply confounded when a man spoke into a transmitter. The Magnavox would simply roar out indistinguishable sounds, due to the fact that the Magnavox amplified the sounds of the propeller and the engines to an enormous degree, and

(Testimony of Edwin S. Pridham.)

it was not at all satisfactory. At this time practically all work on telephone loudspeakers ceased and we were wholly engaged in developing what is known as the "anti-noise transmitter" for the Government, which was very successful in aeroplane communication. I mention this simply to let you know the reason for a hiatus in our experiments in the loudspeaker. After the war this anti-noise transmitter was used on submarines and destroyers. In 1919 we again took up very active work in the development of this loudspeaker. At this time we developed the invention which is outlined in the second patent, which is No. 1,448,279. This patent was applied for April 28, 1920. For practically two years before that time (at least a year and a half) we were busy developing this new type of loudspeaker. We succeeded in developing a very efficient loudspeaker which has stood the test of time. We sold over 400,000 of this particular type, as shown in the patent. It was known throughout the world as the Magnavox dynamic loudspeaker. It was shipped practically to the ends of the earth. It would not get out of order; it was exceedingly robust. At one time in giving a demonstration at the Bureau of Standards an instrument dropped out of the second-story window while they were receiving radio signals, I believe, from Honolulu, or from some distant station. We went out and picked up the instrument and hooked onto the line again and it still operated. That

(Testimony of Edwin S. Pridham.)

shows the very robust construction of the instrument. That instrument, which is the subject of this patent, completely solved our difficulties in presenting to the world a successful dynamic loud-speaker. It has been used in [218] a very great number of different ways. Mr. Jensen and myself developed the first public address systems that were ever used. Whenever very large crowds of people would gather together and prominent men would want to speak to them, the Magnavox Company would get a hurry-up call to supply the Magnavox. In San Diego President Wilson talked to a crowd that filled the whole stadium, estimated at 50,000 people. The Prince of Wales also talked to a very large crowd of people, using a Magnavox. Practically all of the Presidents of the United States have talked to very large crowds of people, using Magnavox instruments. At that time there was no loudspeaker on the market which would do this. When radio broadcasting got into full swing the Western Electric took up the art of public address work, and by arrangement, practically, with them we permitted them to do all the public address work; we made an agreement whereby we would confine our efforts entirely to the use of loudspeakers for radio broadcasting purposes. There was no threat or anything like that; this arrangement was simply a friendly agreement. Since then, of course, Western Electric has done an enormous amount of work, on successful public address work.

(Testimony of Edwin S. Pridham.)

Q. You referred to the various phases of use of the Magnavox; have you any photographs or articles illustrating those different uses?

A. The Magnavox Company being a commercial organization, that is, organized for profit, to sell goods, we always kept a very large collection of all public notices for use for advertising purposes. This little booklet here, of course, had nothing to do with the Magnavox Company's advertising. This was perfectly free of charge. A public notice like this one from New Zealand, and Australia, and from "Science and Invention," and from the popular magazine articles describing Magnavox, also "The Electrical Experimenter," showing a picture of a particular [219] demonstration, of course we kept all those. When I said we kept a book for advertising purposes I did not refer to these articles appearing in magazines. The "Scientific American" had a very long article on Magnavox, and no money was paid them for that; that was simply because of public interest in these devices that that was published. I would like to identify this clipping, here, as illustrating that.

Q. These are photostats of articles which appeared in technical magazines relative to the Magnavox, and which were not in the nature of paid advertisements; is that correct.

A. Absolutely.

Mr. LOFTUS: I offer in evidence this pamphlet that has just been identified by the witness.

(Testimony of Edwin S. Pridham.)

Mr. MILLER: I object to it. My objection, stated fully, is that these newspaper articles are not competent evidence against us, nor are they relevant in the case, because they are hearsay evidence, and, therefore, should not be used.

The COURT: Objection overruled; exception.

Mr. MILLER: Yes, I take an exception, because I want to test that ruling, your Honor.

(The document was marked "Plf's. Ex. 8.")

A. (Continuing) I would also like to present in the same regard this folder of photographs taken at various meetings where the Magnavox was used to address large crowds of people.

Mr. LOFTUS: I offer the group of photographs referred to by the witness.

Mr. MILLER: I object to them as immaterial, irrelevant and incompetent, purely hearsay, and not binding on us; no sufficient foundation has been laid for the introduction of the photographs, that is, proving their authenticity.

The COURT: Q. They are photographs. Where did you get them?

A. Those photographs were made at different meetings [220] where Magnavoxes were used. For instance, President Harding addressing the convention at Minneapolis; President Taft using the Magnavox at Chicago. They are simply illustrating the fact that Magnavox was at that time considered to be a successful loudspeaker.

(Testimony of Edwin S. Pridham.)

Mr. MILLER: Q. Who took these photographs?

A. Different press associations.

The COURT: Q. And you gathered from the press associations?

A. Yes, we gathered them from the press associations.

Mr. MILLER: Q. Who put on this one, "President Harding using a Magnavox, 1920"?

A. I imagine the stenographer simply indicated that there to show what it was.

Mr. MILLER: Here is another one: "Ex-President Taft using a Magnavox in Chicago, 1919." Who put that on there?

A. I imagine our stenographer put it on there.

Q. Your San Francisco stenographer?

A. Mr. Loftus' stenographer.

Q. Was that stenographer over there when President Taft was using the Magnavox?

A. No, I don't imagine so.

Q. How do you know that President Taft used this Magnavox at that time?

A. I was there personally, myself, and gave the demonstration.

The COURT: Q. Were you there each time these pictures show?

A. Yes, I was there each time these pictures show; I was there personally; I operated the apparatus.

Mr. MILLER: Q. You mean the Magnavox apparatus?

A. Yes.

(Testimony of Edwin S. Pridham.)

Q. But you didn't take the photographs?

A. No, but I was there when the photograph was taken, and I saw it taken; and I told the stenographer what it was.

Mr. MILLER: Q. "Admiral Sims, Washington, 1919." Do you know as regards that?

A. Yes, I was present at that demonstration, and I instructed the stenographer to put that designation on that photograph. [221]

Q. The next is "City Hall, in San Francisco, 1916"; what have you to say about that?

A. I was present at that demonstration; and I instructed the stenographer to put that designation on it.

Q. You did not take the photographs?

A. No, I did not.

Q. You don't know whether the photographs are correct, do you?

A. Yes, I do.

Q. How do you know it?

A. I was present right at the time the photographer took the photograph.

Q. How do you know that the photographer was correct in taking the photograph? You simply stood by and saw him take a photograph. You come here now and present a photograph here and you say that it is correct, and you say that is the photograph which was taken at that time, do you?

A. Yes. For instance, I might have posed the

(Testimony of Edwin S. Pridham.)

group, myself, and told the photographer to take the picture of the group.

Q. Did you pose the group?

A. Yes, generally I did.

Q. Here are some thousands of people; did you pose that group,

A. I imagine I did; every one of them.

Q. You went out and posed the whole 50,000 that are there.

A. Yes, if you want to ask that question. I mean I was present and the photographer took the picture, and I could tell from the result of the picture that it was a correct picture.

(The photographs identified by the witness were again offered in evidence and objected to as immaterial, irrelevant, incompetent, and no sufficient foundation laid, and as not binding on defendants. Objection overruled and exception noted. The group of photographs, consisting of four in all, were here marked "Plff's. Ex. 9.")

In saying that I posed the groups in the photograph Pff's. Ex. 9, I simply meant that the camera was directed toward the crowd in order to get a reasonably satisfactory picture. [222] The photographs, Plff's. Ex. 9, were of the earlier form of instrument as shown in the first patent in suit. That is with the flat type of voice coil. I have other photographs of the form of device illustrated in the second patent in suit, showing the various uses to which the device was put. The originals of these

(Testimony of Edwin S. Pridham.)

were offered in the trial of Magnavox v. Hart & Reno, and I have photostat copies thereof. The photographs of which the present photostats are copies were practically all taken under my supervision. No. 1 shows Governor Cox at the Fair Grounds in Dayton, Ohio, in 1920. I was present. No. 2 shows some gentleman using the Magnavox at the Minnesota State Fair. I was not present on that occasion. No. 3 shows the Magnavox instruments being used to announce to a very large concourse of people at the Gravesend Race Track, New York City. I was present at the race track and actually installed the instruments; but I was not present at the time Mayor Hylan made the talk. No. 4 shows the Magnavox loud speaker for directing traffic at the football games at the University of California in 1920. I installed that apparatus myself and directed the traffic to the football game from the street cars. No. 5 shows the type of "Tele-megafone" (which we called the type of instrument) which was used at the University of California to direct football traffic. No. 6 shows the instrument being used in directing motion pictures. I was present at the moving picture studio lot and gave a demonstration to William DeMille. No. 7 is simply a display in which the Magnavox is shown. I was not present when this photograph was taken. Picture No. 8 was taken in April 1919. I was present at that demonstration and it shows a part of the large crowd at the Treasury Building in Washing-

(Testimony of Edwin S. Pridham.)

ton. No. 9 is a telegram from the Chief Signal Officer, U. S. Army, Major General Squier. I saw these telegrams when they [223] were received. There is absolutely no question that they were received, because we made the apparatus and sent it to the Army. The next photograph, page 10, shows the use of the Magnavox loudspeaker for attracting crowds to shop-windows; the reverse side showing the use of the Magnavox speaker for dance-halls. I personally installed the Magnavox loudspeaker shown in this particular drawing. "That Man Pitts" had a little stationery store, as your Honor might remember, and we installed the Magnavox; the demonstrator inside the window would talk into a transmitter, such as they do in thousands of places to-day, explaining something inside the window to the crowd outside. We conceived the idea that it would be a very fine thing to have a loudspeaker outside the window, and when the demonstrator talked into that transmitter the loudspeaker would tell the crowd outside what it was all about. It was very successful. We sold many thousands of instruments for that purpose. No. 11 is a photograph taken at Washington, D. C., and shows a part of the large crowd which listened to the Victory Loan demonstration, at which I was present. I gave the demonstration on the ground and controlled the operation of the Magnavox loudspeakers. Mr. Metcalf was the aviator who flew at a height of 2,000 feet and talked by radio from the aeroplane to the

(Testimony of Edwin S. Pridham.)

ground. This radio was reproduced on Magnavox equipment and broadcast by acoustical sounds to the very large crowd, estimated at maybe 50,000 or 60,000 people. I was not present at the next photograph. It simply indicates the various uses to which the Magnavox was put. It shows General Booth, of The Salvation Army, using Magnavox equipment for some dedication. The next picture shows General Booth talking into the transmitter with the Magnavox loudspeaker reproducing his voice.

Q. Do you remember when that was?

A. That was in 1921. The next picture simply shows Magnavox equipment being used for [224] public address work. The next picture shows Mr. Hoover, who was then Secretary of Commerce, addressing a large crowd of people at the dedication of the Baby Hospital in New York City. I was present at that demonstration and installed the equipment, and instructed President Hoover (or Mr. Hoover, as he was at that time; he was then Secretary of Commerce), how to use the equipment. I might say that these photographs are simply to illustrate the wide use to which the Magnavox loudspeaker was put in the days before the radio broadcasting became popular.

(The group of photostats of photographs identified by the witness was then offered in evidence, and objected to on the same ground as urged in connection with Plff's. Ex. 9. Ob-

(Testimony of Edwin S. Pridham.)

jection overruled and exception noted. The several photographs were marked "Plff's. Ex. 10.")

In these various instruments shown in the photographs and newspaper clippings, a horn was used. The horn, if it is properly designed, introduces no components into the sound. It is well accepted in theory and fact that the horn, if made of proper material so it will not bend out of shape or vibrate, introduces no component or sound of itself; that is, if there is a distorted sound coming out of the soundbox there is no kind of horn that is made that will undistort that and make pure tones come out if impure tones are in the soundbox; small diaphragms are generally used with horns so that the content of the horns, which is air, the apex of that air, rests upon the diaphragm; the diaphragm gets a grip upon that air and simply expels the air from the horn. There are many and various types of horn used. The latest type, which has been very successful, is called the exponential horn. The term "exponential horn" simply means that there is a certain ratio of cross-section of the horn to the taper at any point, to get the most perfect conical section of air resting upon the diaphragm. [225]

Q. In your discussion of that subject, have you made any charts to illustrate the points which you are referring to?

A. This is the variation in forms of soundbox; is that what you wish, Mr. Loftus? The

operation of the horn, as I said, simply controls the volume of air which the diaphragm sets into vibration. It is practically identical in its function with a cone. The cone has been said by the defendants to be not a diaphragm; but throughout the art, and even in Mr. Kellogg's patent, he calls for a conical diaphragm. It is well known in the art that diaphragms may be flat or conical. The conical diaphragm simply has the air inside of that cone and forces it out into the air. A flat diaphragm simply grips the air and pushes the air out. The actual difference, if any, **between** a cone and a diaphragm is simply a matter of mechanical rigidity. When a very light diaphragm is used it necessarily must be of mechanical rigidity and made in a conical shape. However, flat diaphragms of large size, of equal size of the present-day cones, have been made and have proven very satisfactory. They are shown in the art.

Q. Have you had any actual experience in the operation of smaller-sized diaphragms, such as shown in either of the patents in suit, fitted with a ferrule or opening at the center constituting the top of the sound-box, and testing that without the use of a horn?

A. I have made many thousands of experiments in the laboratory in my past 20 years' experience on the operation of the diaphragms. In the laboratory we have used diaphragms with horns and without horns, small diaphragms, large diaphragms, conical diaphragms, diaphragms supported in al-

most every imaginable way. From my practice and experience I know positively that a diaphragm, if made of a certain definite size, equal to the conical diaphragm operated in the same way, will produce identical [226] results. We have tried these many times in the laboratory, and I have had very successful results in using flat diaphragms and conical diaphragms without ferrules, and even with ferrules.

The COURT: Q. Mr. Pridham, will you name the elements contained in a successful dynamic loudspeaker?

A. The elements contained in a successful dynamic loudspeaker consist of a magnetic structure in which there exists a narrow air gap. There must be means to hold the poles which form that narrow air gap in spaced relation. There must be a diaphragm mounted upon one of those poles. The diaphragm must, of course, be held in some supporting medium like the rings or soundbox. The coil must extend into the narrow air gap so as to be free to vibrate over its full range without coming in contact with the poles. That diaphragm can be either enclosed or exposed. A horn may be used on the diaphragm or the horn may be dispensed with, according to the size of the diaphragm.

Q. Can you have a successful dynamic loudspeaker without a diaphragm or a soundbox, or their equivalents?

A. It is absolutely impossible to have a successful dynamic speaker without a soundbox and

(Testimony of Edwin S. Pridham.)

diaphragm or their equivalent, and there would be nothing to produce the sound.

Q. When you speak about the spacing means, what occurs if one of these pole pieces should get a little off center and there were no positive means there to control it or keep it in spaced relation?

A. In dynamic speakers it is essential to have a very strong magnetic field existing in the air. If one of those poles should become off center, that is, a little closer to one side or the other, there would be an enormous force of attraction between those two magnetic poles. In some of the modern loudspeakers there is a force existing of practically 20,000 lines of magnetic force per square centimeter in the air gap; that force [227] exerting over three or four square inches would attract most probably a force of 2000 or 3000 pounds. If that pole in there should become loose or get off center, this terrific magnetic attraction which exists between the two poles would immediately crush the coil. Another very disastrous thing would happen if the pole becomes eccentric in that area: The magnetic force on one side would be very much stronger than on the other side, and consequently the coil would become unbalanced in the magnetic field, and instead of having an axial action it would have a diagonal action on the magnetic field, and if the coil moved any distance at all it would strike the pole causing a buzz. That has been the very serious difficulty in the manufacture of loud-

(Testimony of Edwin S. Pridham.)

speakers. One of our greatest troubles in designing the speaker is to get the central core perfectly concentric with the outer core. If it becomes loose in any manner whatsoever you have a defective speaker, and it comes back to the factory and it costs money to replace it.

Q. Turn now to the chart which I handed you, and in connection with that explain your understanding of a soundbox.

A. A soundbox, as known in the art from almost the very beginning, has always seemed to me to mean the enclosure of the diaphragm or the supporting means for the diaphragm. Now, referring to this chart which the draftsman made from pencil sketches which I made, we see the patent to Lumiere, No. 1,036,529. That represents Lumiere's soundbox. It consists of peripherally mounted conical diaphragms; the horn is a short, trumpet-like form, which Lumiere states in his specification may be used or not. The diaphragm is very flexibly supported at its periphery. I have here a physical embodiment of the type of soundbox and diaphragm illustrated in the Lumiere patent. I purchased it in Los Angeles. It was on [228] the market for many years. The soundbox in this device is represented by the supporting rings of the diaphragm. This is the diaphragm which Lumiere has patented in his patent. These rings are supported on the frame of this device. That was quite a successful loudspeaker. I might say that

(Testimony of Edwin S. Pridham.)

the Victor Phonograph Company sold many thousands of speakers using this type of soundbox in connection with the magnetic drive. This particular one had a dynamic drive. I have operated that speaker in the laboratory and it operated very well. (The specimen of Lumiere soundbox and diaphragm was then offered in evidence and the same was marked Plff's. Ex. 11.)

Continuing with my explanation of the chart, the next figure represents a diagrammatic drawing of the Magnavox soundbox, which shows the peculiarly-corrugated diaphragm 2 supported at its edges 3; the ferrule of the horn is shown at 1. When larger diaphragms are used we have found that it is not necessary to use a horn. A term has come into use, which is known as a "baffle"; that baffle is simply a short horn, something like Lumiere shows in Fig. 1. We have shown in the lower left-hand figure what is known as a directional baffle. It is really a short horn with a very wide mouth. The mouth fits the diameter of the diaphragm. This particular type at the present time is sold and is being used for advertising purposes on trucks. Almost any day you can go down on Market Street and see one of those devices mounted on a truck going down the street. When you don't care for a directional horn and wish to have the sound propagated over a wider area, you use a wide baffle with the soundbox and diaphragm as illustrated in the lower right-hand drawing. (The chart referred to by the witness was offered in evidence

(Testimony of Edwin S. Pridham.)

and the same was marked "Plff's. Ex. 12.") [229]

With reference to the prior art that has been discussed here by defendants' expert, the United States patent to Pollak, 939,625, does not refer to a telephone reproducer; it refers to a telephone transmitter. The transmitter buttons are not located in any connection with the magnetizing device at all. Therefore, I hold that that is not a correct reference, because the Claim 8 of the Magnavox patent distinctly states that the combination includes a diaphragm and sound-box mounted upon the outer pole of the magnetic structure. Nothing like that is shown in Pollak.

I would also like to point out the fact that Pollak, while indicating at No. 8 non-magnetic supports for the core, does not in any way say that those are spacing means. Without those supports the core, of course, would fall out of the magnetic circuit, as there are no other means of holding it in there. In addition to that, even if Pollak were considered a telephone reproducer for reproducing acoustical vibrations, it would hardly act as such on account of the very fine metallic strips which are very close to the end of the magnet, and any vibration of the coil at all would immediately cause these strips to hit the magnet and cause a buzz. The coils might vibrate in one direction, but certainly could not vibrate in the other. In relation to Pollak's air gap, he states in his specification that he requires a narrow air gap. In the figure you will notice that there are two air gaps in the magnetic

(Testimony of Edwin S. Pridham.)

circuit, one at either end. There is only one magnetizing coil on the instrument. Therefore, the two air gaps have the effect of being in parallel or demanding twice the area of magnetization that one air gap would have. Consequently, you would have an efficient magnetic circuit for the amount each wire used in the magnetizing coil. You would not have an efficient magnet circuit in that case. [230]

A. In the Lodge British Patent there is not one drawing shown in which a diaphragm and soundbox is mounted upon an outer pole of the magnetic casing where there is spacing means within the casing to separate the two poles. The only description or illustration of a loudspeaker consists of a large sounding-board which is supported, as Lodge states in his deposition, by retort stands which are not in any way connected with the instrument, whatsoever. That is the only loudspeaker that is mentioned in this patent. We know that if any vibration were given to this large sounding-board which is simply supported on retort stands (so far as we know they were perfectly free to move) it would be manifestly impossible to keep that coil in the magnetic field; it would jump around and vibrate. There are other means shown for holding it in any fixed relation with the air gap. There are no means shown in Lodge's patent where a magnetic casing with a central pole is held in spaced relation with an outer pole, and where the soundbox and diaphragm is mounted on the outer pole, as called for in Claim 8 of the Magnavox patent.

At this stage of the proceedings plaintiff offered in evidence the depositions of Sir Oliver Lodge and Edward E. Robinson, taken in London. The same were admitted and deemed read in evidence. The several exhibits attached thereto were also offered, and received in evidence and marked as follows: The Lodge instrument was marked Plff's. Ex. 13; the retort-stand was marked Plff's. Ex. 14; and the annular coil was marked Plff's. Ex. 15. [231]

DEPOSITIONS taken in London, England, on the 3rd, 4th and 11th days of December, 1931, before Russell M. Brooks, Consul of the United States of America, acting under a commission issued out of the United States District Court for the Northern District of California, at San Francisco.

DEPOSITION OF EDWARD E. ROBINSON,
a witness on behalf of Plaintiff:

Direct Examination by Mr. Dyer Smith:

My name is Edward Ernest Robinson. I reside at Park View, Northcroft, Egham, Surrey. I was 70 years old on the 1st September last. I am Research Assistant to Sir Oliver Lodge and have been since 1885. In December, 1898, I had a kind of dual occupation. I was both his Lecture Assistant and his general assistant in fact. I am a little bit deaf. The paper you hand me (marked Defendants' Ex. 6) is a copy of part only, of the Paper read by Sir Oliver Lodge, entitled "Magnetic Space Telegraphy," this being read before the Institution of Electrical Engineers at London, 8th December, 1898. I was quite familiar at that

(Deposition of Edward E. Robinson.)

date (December 8, 1898) with apparatus illustrated in the Paper as forms of vibrating coil telephones. I refer particularly to Figures 6, 7 and 8 in the Paper. My employment with Sir Oliver Lodge was in his Laboratory at Liverpool at that time. That was a Laboratory connected with Liverpool University.

Apparatus, similar to that illustrated in the Figures referred to had not all of it been made in our Laboratory. The magnet shown in Fig. 6 is a large electro-magnet used for optical experiments and in other general work, lecture work, and general laboratory work. It was not made especially for these experiments. But apparatus of the general character at least, represented by these Figures, was in the Laboratory at Liverpool at that time. That does not apply to what comes later in the Paper. Those particu- [232] lar instruments in Fig. 6 were in existence at the time. The electro magnet shown in Fig. 6 together with the two pole pieces. The pole pieces had a hole drilled through their centre for optical experiments. That is all of that piece of apparatus that was really in existence before these experiments that we are talking about. The remainder of the apparatus shown in Fig. 6 was made up ready for experiments in the Laboratory before this Lecture by Sir Oliver Lodge.

Q. 13. Please now refer to Fig. 7 of Sir Oliver's Paper which we are discussing and state whether or not this is an accurate representation of a form of Sir Oliver's sound-board telephone

(Deposition of Edward E. Robinson.)

with which you were familiar at that time?

A. 13. I cannot say that I actually have very much memory of that particular form. I do not remember clearly the existence of that form of telephone.

Q. 14. Have you any recollection whatever of ever seeing a piece of apparatus in the Laboratory or elsewhere exactly corresponding with that Fig-Fig. 7?

A. No.

Q. 16. Please describe the actual apparatus in the Laboratory with which you were familiar which was most similar to the apparatus illustrated in Fig. 7?

A. Well, the loud speaker that I made up to Sir Oliver's instructions consisted of a movable coil fixed to a board about 4 ft. square and about $\frac{3}{8}$ " in thickness; it may have been as much as $\frac{1}{2}$ ", but that was about the size of it, and this coil was capable of moving in an annular gap of an electro magnet. I think that describes it.

Q. 17. How was the board supported?

A. 17. It was supported on three iron rods capable of adjustment for height in order that the coil could move freely in its annular gap. [233]

Q. 18. What were these three rods mounted on?

A. 18. They were mounted on a table.

Q. 19. Was the electro magnet also mounted on the same table?

A. 19. Yes, it stood on the table. It was placed on the table.

(Deposition of Edward E. Robinsin.)

Q. 20. This photo-print shows a sketch which was made recently by one of Mr. Thornton's assistants. This sketch was made from my description to Mr. Thornton of the apparatus which we have just been referring to. This sketch correctly represents my remembrance of the apparatus which we have just been describing. There is one point that is not quite clear and that is the method of attachment of the moving coil. It is shown clearly in the drawing in the small figure at the right-hand bottom corner of the drawing. Otherwise it is an exact representation of the apparatus as actually used. That is exactly how it was rigged up. As I remember it, the moving coil B was connected to the sounding board C by the spider or tripod having three arms F and the arms F were attached to the sounding board by means of the small ball E and that was fixed at the centre of the board by means of a little screw, fixing the ball rigidly to the large plate, meaning the sounding board C. The supports D merely rested on the table.

Q. 25. And did the sounding board C rest on the tops of these supports D, or was there some rigid connection between supports D and the sounding board?

A. No. The boards simply rested on the tops of the iron rods. There was no rigid connection.

Q. 26. Were the supports D positioned in a circle about the centre of the electro magnet?

(Deposition of Edward E. Robinsin.)

A. That I would not be too sure of because I don't think so. There was no particular care taken; they would be more or less on the circle but there was no particular care. I mean, it was not a very accurate kind of set—not accurately set out at all. They would be about the same distance [234] from the centre of the magnet; they would be practically on the circle but it was of no consequence whether they were precisely so or not.

These supports D were adjustable in height.

Q. 28. I hand you herewith an iron stand which may perhaps be called a retort stand, and ask you if you know what it is?

A. It is the form of stand we used for general purposes in the laboratories. It was used to support the sounding board in the experiment which we are referring to. This stand is one of the actual retort stands which were used for supporting the sound-board C in the apparatus shown in the sketch at the time of Sir Oliver's Lecture in December, 1898 and which are represented by the letter D in the sketch which I still have before me. It has been in my possession all the time. I had it in the Laboratory in Liverpool in 1898 and it has been in my possession wherever I have moved to since then.

(By Mr. Dyer Smith: I now offer in evidence as Plff's. Commission Exhibit No. 1, Robinsin memory sketch of Libratory Coil Sound Board Apparatus. I also offer in evi-

(Deposition of Edward E. Robinsin.)

dence as Plff's. Commission Exhibit No. 2, the Retort Stand identified by the witness.)

This is a photograph of the Exhibit just identified. I made that just lately. There is also a 2-foot rule photographed with it to give an indication of its size.

(By Mr. Dyer Smith: I introduce the photograph just identified as Plff's. Commission Ex. No. 3, photograph of retort stand.)

Q. 35. I notice that the sliding rod in the retort stand is screw-threaded at one end. Was the retort stand used with this screw-threaded end uppermost, or lowermost, or was it immaterial which end was up.

A. It was quite immaterial which end is up. [235]

This photograph I took, represents one of the annular gap magnets that was made in Liverpool and also one of the moving coils used with this magnet. These elements correspond to the electro magnet and the moving coil shown in the sketch, Plff's. Commission Ex. 1. To make it clear. It need not be like it, but one of that form was actually used for the Exhibit shown. The actual electro magnet shown in the photograph, since the time of the experiments referred to has been partly in my possession and partly in the Physics Laboratory of Birmingham University. It is true that this represents one of the original electro magnets used in the experiments referred to about 1898. I do

(Deposition of Edward E. Robinson.)

not remember exactly the dimensions of the electro magnet shown. I will bring the actual apparatus here tomorrow.

(By Mr. Dyer Smith: I introduce into evidence the photograph which has just been identified as Plff's. Commission Exhibit 4, photograph of electro magnet and coil.)

Referring again to Sir Oliver's Paper as read at the Institution of Electrical Engineers meeting. I do not know who made the drawings which illustrate this Paper. I was not present at the Lecture; that is, the reading of the Paper referred to by Sir Oliver on December 8th, 1898. I do not know whether any other assistant accompanied Sir Oliver to this meeting of Electrical Engineers. I feel sure that the Lecture by Sir Oliver was illustrated by means of lantern slides. A complete set of lantern slides was made and I believe that they were used in that Lecture. They were made in Liverpool and I feel sure they were made on purpose to illustrate that Lecture of December 8th, 1898.

Referring again to Fig. 7 of Sir Oliver's Paper, this Figure differs from the apparatus which I saw in the Laboratory at that time in the method of fixing the plate—the vibrating plate. [236] And by "vibrating plate" I mean the sound-board shown at E in the Figure. The sound-board or plate E seems to be mounted in Fig. 7 by means of pins resting on top of the top plate S of the electro magnet. I do not remember seeing that kind of

(Deposition of Edward E. Robinson.)

support. I remember seeing apparatus of this character in which the sounding board was as small in diameter or width as the board illustrated in Fig. 7. As a sounding board we used all kinds of things; in one case we used a tambourine, and also used the body of a violin; and in place of the 4-foot board we used various sizes of board much smaller than that; the 4-foot board was the largest I remember our using.

In the actual apparatus I was not familiar with the method of supporting the coil from the sounding board shown in Fig. 7.

Q. 54. Omitting Fig. 7 from consideration, was the remainder of the apparatus, which is illustrated in Sir Oliver's Paper, actually made up in the form of demonstration apparatus at Liverpool before this Lecture? Everything shown in the Paper?

A. Yes, it was made up for experimental purposes; it was made at the Laboratory.

Q. 55. These various experimental models must have taken up a great deal of space, I suppose?

A. Yes; they did, of course.

Q. 56. Were some of them heavy?

A. Yes, some of them were very heavy. The apparatus shown in Fig. 6, for example, of the Paper, was very heavy. It was a big electro magnet. My impression is that none of this apparatus was taken from the Laboratory to London for the purpose of illustrating Sir Oliver's Lecture.

(Deposition of Edward E. Robinson.)

Fig. 7 of Sir. Oliver's paper is similar to Fig. 5 of an account of the Lecture given in the "Electrician" on 6th January, 1899, a copy of which I have here, apparently being marked Defs'. [237] Ex. 5. I notice that this illustration has dimensions marked thereon. I do not know what this dimensioned drawing was made from. To my knowledge working drawings were not made of the various pieces of apparatus such as that illustrated in Fig. 5 of the "Electrician" or Fig. 7 of the Paper itself as read before the Institution.

Referring to the apparatus shown in my sketch, Plff's. Commission Ex. 1, there was made up a number of variations of this apparatus. In principal they were the same in construction; they were the same, but they were differently wound and the dimensions different. There were quite a number of annular gap magnets made up. They were all wound differently. These annular gap magnets were made up—a great many of them. Some as electro magnets and others as permanent magnets. There would be at least a dozen of them, may be more.

Q. 63. Were any commercial models made?

A. That is a difficult question. The models that were made up were made for Sir Oliver's experiments on telegraphy. They were made up for telegraphy and I do not think that that ever reached a commercial stage.

Q. 64. Referring again to the sketch, Plff's.

(Deposition of Edward E. Robinson.)

Commission Ex. 1, how was the moving coil centred in the gap for demonstration in the experiments?

A. Well, that was quite an easy matter. Its height was adjusted by means of the stands D and the sideways movement was got by just shifting the top board with regard to the stands. It was quite a simple matter. You do it like that (demonstrating) and simply move it so (the witness here poises a paper horizontally and moves it horizontally).

Q. 65. It was all done by eyesight, then, I take it?

A. All, yes.

Q. 66. Referring again to the sketch, Pliff's. Commission Ex. 1, [238] to get it clear; do I understand correctly that the moving coil B was attached to the sounding board in the apparatus with which you are familiar in the manner shown in the small Figure at the right-hand side of the sketch and not in the manner shown in the small Figure at the left-hand side of the sketch which represents the coil B directly connected to the sounding Board?

A. It is quite right. It was connected as shown in the right-hand bottom corner.

Cross-Examination.

By Mr. Basil Drew:

I have not yet ceased being an assistant to Sir Oliver. I still do some work for him and Sir Oliver is still doing some research work. This

(Deposition of Edward E. Robinson.)

drawing which is Plff's Commission Ex. 1 was not actually made by myself. It was made according to my approval, and I approved of it.

XQ. 72. When it was put in as an exhibit it was called "Vibratory Coil Sound Board Apparatus." When that name was put to you, you described this in a different way. Do you remember?

A. I remember how I described it.

XQ. 73. Will you please tell me what you called this—this apparatus shown in the drawing?

A. I called it a Lodge loud speaker, if I remember rightly. I don't know that Sir Oliver Lodge took out a patent which covered the devices shown in the illustrations in the Paper read before the Institution of Electrical Engineers. You ask me to look at a copy of Sir Oliver Lodge's British Patent Specification No. 9712 of 1898 which I believe to be Defs'. Ex. 19. I don't remember having seen it. The Specification is dealing with the apparatus described and illustrated in the report of the Paper read before the Institution of Electrical Engineers. On Page 1, line 35, of this Specification it says: "The final telephone of the series is usually a loud speaking iron disc or diaphragm telephone." [239]

On page 2, lines 1, 2 and 3, it says: "I call it a bellowing telephone because a gentle tone at one end of the series becomes a shout at the other end."

(Deposition of Edward E. Robinson.)

In this Specification Sir Oliver Lodge is speaking, in some instances, of a single telephone receiver, and in other instances of a series of receivers for magnifying the sound. The passage I have just read may be dealing with the final telephone of a series.

XQ. 80. My question to you is this; are the terms used "loud speaking" and "bellowing telephone," terms which would be applicable to the sound which it would be possible to produce under certain circumstances with the instrument shown in the sketch, Plff's. Commission Ex. 1?

(By Mr. Dyer Smith: I object to the question as somewhat indefinite and as hypothetical.)

XA. 80. I have got to give you the actual facts. That (pointing to Plff's. Comm. Ex. 1) loud speaking telephone was not used, as far as I can remember, in these experiments at the end of a series of magnifiers. The telephone that was used was one made by Muirhead & Company and a diagram of it is shown in one of the other papers. In the experiments where a series of magnifiers were used, the final telephone was of the form illustrated and described on page 843, Fig. 12 of the Paper read before the Institution of Electrical Engineers.

XQ. 82: Now, Mr. Robinson, my question has nothing to do with the use of the apparatus shown in Plff's. Comm. Ex. 1 as the last of a series; my

(Deposition of Edward E. Robinson.)

question is, was the noise, the sound, which that apparatus could be caused to give however used by itself as apart from being the last member of a series, one which could be called loud speaking or bellowing? [240]

(By Mr. Dyer Smith: I repeat my objection to the question as to the hypothetical quality of the same involved in the words "could be used" etc.)

XA. 82. I rigged it up as a loud speaker for Sir Oliver at his suggestion.

XQ. 83. Did it, in fact, function as a loud speaker?

XA. Yes, it certainly did.

XQ. 84. When it was used in this way what were the nature of the currents which were supplied to it?

XA. They were supplied through a microphone connected directly with the moving coil of the—— (answer not complete).

There was no amplification or similar device between the microphone and what you call the loud speaking telephone.

XQ. 86. Will you describe how loud a sound was given off under those circumstances by the apparatus illustrated in Plff's. Comm. Ex. 1?

(By Mr. Dyer Smith: I must object to this whole series of questions unless it is made to appear from the witness that the loud speaking experiments to which he is referring were

(Deposition of Edward E. Robinson.)

connected with the publication, namely Sir Oliver's paper, read before the Institution of Electrical Engineers.)

XA. 86. Well, when connected with a microphone the speech is quite loud. You could hear it all over this room, for instance, quite comfortably. It is not as loud as—There is no real magnification. It is not as loud as a person's speech, naturally.

XQ. 87. Mr. Robinson, you say it would be heard all over this room. Would you agree that this room is about 12 ft. x 15 ft. x 16 ft. high?

XA. Yes, I should think it is a little more.

XQ. 88. Would you go so far as to say this, Mr. Robinson; that this apparatus gave off a sound which would be clearly audible all over any ordinary domestic room?

XA. 88. Yes. [241]

XQ.89. Following Dr. Lodge's Paper on December 8, 1898, a Paper was read by Mr. Evershed on December 22, 1898, in which he refers to Dr. Lodge's Paper of Dec. 8th. I ask you to look at Page 892 of the Journal of Electrical Engineers where Mr. Evershed says: "I feel sure the moving coil telephone will ultimately displace the telephones now used, not only for motor work, that is to say, for induction telegraphy, but also for speed. It is clear from what we all heard of Dr. Lodge's telephones that they are almost equal to the ordinary patterns as speech instruments and,

(Deposition of Edward E. Robinson.)
electrically, they are infinitely superior." I now want to show you one further passage. On Page 911 of the same Journal, Mr. Sennett in the discussion on these two papers said: "Professor Lodge touched upon and demonstrated to us with his remarkable loud speaking relay micro-telephones, the characteristic sound which it is well known that every telephone possesses, and which detracts so much from the efficiency of the instruments."

XA. 89. Yes.

XQ. 90. Do you still think that Dr. Lodge gave no demonstration when he read his Paper?

XA. I cannot say. I don't remember.

XQ. 91. You do not remember whether he did or not?

XA. No. He will probably be able to answer that question, but I cannot say definitely.

XQ. 92. You said that the apparatus shown in Plff's. Comm. Ex. 1 was made up with varying sizes of sound board?

A. Yes. The largest sound board I recollect was 4 feet square. The very smallest sound-board I can recollect was in size about 18" by about 11". I don't remember it being used with a smaller sound board than that. Looking at Fig. 7 on page 838 of the Journal of the Institution of Electrical Engineers, this illustrates a telephone substantially similar to that shown in Plff's. Comm. Ex. 1, [242] except that the sound-board is smaller; the attach-

(Deposition of Edward E. Robinson.)

ment of the sound-board to the coil is like that shown on the left of the sketch rather than that on the right, and the support of the sound-board is different. Underneath the drawing appears: "Another form of sound-board telephone, with the receiving coil surrounding one pole of the magnet, and surrounded by the other pole. The coil attached direct to sound-board E". Nearly at the bottom of the page appears these words: "Another form was then made with a magnet specially designed as shown in Fig. 7".

XQ. 99. Do you say that such an instrument was not constructed or that you do not remember it?

XA. I don't happen to actually remember it.

XQ. 100. Now will you look at page 367 of the "Electrician" for 6th January 1899 at Fig. 5?

XA. Yes, that's the same thing there.

XQ. 101. I want you to compare the Fig. 7 of the Journal and Fig. 5 of the "Electrician." Are the dimensions in these two figures the same, or different?

XA. Well, of course, I would say probably they are the same.

XQ. 102. As drawn, do the dimensions appear to be different?

XA. Why yes, they do. This is a long magnet, and this a comparatively short one compared with this (pointing to the Figures).

(Deposition of Edward E. Robinson.)

XQ. 103. Would you look at Fig. 5 of the Journal. Do you see that the dimensions are given?

XA. Yes.

XQ. 104. As actual dimensions are given, would you not suppose that this drawing was made from an actual instrument?

(By Mr. Dyer Smith: I object to this question as calling for a supposition merely, which is not evidence.)

XA. 104. Yes.

XQ. 105. As accurate dimensions are given would you not suppose that this figure is drawn from an actual instrument? [243]

XA. 105. Certainly I can think nothing else. Obviously it was taken from an instrument.

XQ. 106. Do you see, in the top right-hand corner of the drawing, there are the words: "Three supports"?

XA. 106. Yes.

XQ. 107. With an arrow?

XA. Yes.

XQ. 108. What do these supports appear to be?

XA. Well, they might be metal pillars, or anything of that kind.

XQ. 109. What is the purpose of these supports?

(By Mr. Dyer Smith: This question also is objected to since the witness is being asked to state the purpose of apparatus which he says he has never seen.)

(Deposition of Edward E. Robinson.)

XA. 109. Yes, well—I didn't say I had never seen it; but I don't remember seeing it. Did I answer your question?

XQ. 110. What is the purpose of those supports?

XA. Why, to support the vibrating plate.

XQ. 111. Do those supports serve the same purpose as the supports D in Plff's. Comm. Ex. 1?

(By Mr. Dyer Smith: Same objection.)

XA. 111. Yes, they must do.

XQ. 112. If a magnet structure, such as that shown in Plff's. Comm. Ex. 1 is used with a small sound-board of a diameter similar to that of the magnet structure, or not very much greater, would it be possible to use supports such as D in Plff's. Comm. Ex. 1?

(By Mr. Dyer Smith: Please note that my objection to all questions of a hypothetical character to this witness are objected to and this objection is to be understood as being repeated for all questions of that general character.)

By Mr. Basil Drew: These questions are being asked the witness, not only as a witness of fact, but also as an expert concerned with experiment in this field of science.) [244]

XA. 112. Might I just say one thing? You can ask the question afterwards as you like, or not; but you are talking about two instruments. You are talking about that one (pointing to Plff's.

(Deposition of Edward E. Robinson.)

Comm. Ex. 1) and you are talking about this (pointing to Fig. 5 of the "Electrician")—they are two different instruments; that is a Lodge loud one (pointing to Plff's. Comm. Ex. 1) and that is not (pointing to Fig. 5 of the "Electrician".)

XQ. 113. Mr. Robinson, can you now answer my question?

XA. Would it be possible to use those supports? No.

XQ. 114. Now, Mr. Robinson, you have said that Fig. 5 of the "Electrician" was not a loud speaker?

A. Yes.

XQ. 115: May I read you what is said about it in the "Electrician":

(Mr. Drew read the last paragraph on page 366 and the first column and a half on page 367.)

Does the reference at the end of this passage to the present plan of a large sound-board and a light coil rigidly attached to a point at its middle by either a light tripod or a light cone, refer to a device like that shown in Plff's. Comm. Ex. 17.

A. Yes.

XQ. 116. On reading this passage, do you recollect Fig. 5 as being an earlier form of the receiver which you describe?

XA. Well, I am afraid it makes me look rather obstinate, but I don't remember it, though it is perfectly evident that it was in use. You see,

(Deposition of Edward E. Robinson.)

where it was, when I rigged up that form (the form in Plff's. Comm. Ex. 1) for Sir Oliver, I was interested in that form. What I was interested in was the construction of a loud speaker. The apparatus shown in the figure is not a loud speaker. It is referred to as a sensitive type of telephone equal to the Collier and no doubt it was if you put your ear on the board. You couldn't describe the Fig. 5 form as a loud speaker any more than you could a Collier. [245]

(By. Mr. Dyer Smith: I do not wish to seem to be making too many objections, but I must enter an objection to that part of the witness's answer reading: "It is perfectly evident that it was in use," since this statement is evidently a conclusion.)

XQ. 117. Mr. Robinson, you have said that a large number, a dozen or more, annular gap magnets were made at that time. Is that correct?

XA. Yes; not a dozen or more of that altogether (pointing to the one shown in Plff's. Comm. Ex. 1). Some of those and one or more like Fig. 9 and one or more like Fig. 17 in the Journal of the Institution of Electrical Engineers. They take a lot of different forms; there are no two alike of them. Both electro magnets and permanent magnets. There were certainly four made with a single annular gap of the general shape of that shown in Plff's. Comm. Ex. 1, and there may have been more; but there were four, if I remember. The four differed in size; they also differed in the pri-

(Deposition of Edward E. Robinson.)

mary windings and also the moving coils differed. The primary windings differed both in the number of wires and the diameter of the wire. The moving coils differed enormously; some were made up of an aluminum tape with a very, very small resistance and others were wound with aluminum wires of various sizes. There were also moving coils made of very thin copper wire. They were different in all kinds of respects. They were used as experimental things and naturally enough they were made up in all sorts of sizes. I made up one that was used in Liverpool and that was used to give a demonstration. I can remember that various people used to drop in from time to time.

XQ. 124. Do you remember demonstrations being given in Liverpool?

XA. It is a funny question really, because if Sir Oliver happened to have some friends there to whom he wished to [246] show the loud speaker I used to rig it up on the table; I got on top of a set of cupboards and got it down; got two or three retort things and the whole thing was rigged up in 3 or 4 minutes. That is what I mean by demonstration. I gave a demonstration with it in Birmingham somewhere between 1902 and the beginning of the War. That I could get for you because it is in their conversazione programme, The Midland Institute.

(By Mr. Dyer Smith: I am afraid I must object to questions and answers referring to

(Deposition of Edward E. Robinson.)

demonstrations or anything done subsequently to Sir Oliver's Paper of 8th December 1898 and which demonstrations are not described in any printed publication or patent in evidence in this case.)

I cannot recollect the date nearer than 1902 and the War. I think it is very unlikely that Sir Oliver was present on this occasion. I demonstrated this as a loud speaker and it worked on this occasion. I don't know of any other demonstrations anywhere else of this loud speaking telephone.

XQ. 133. How many of these magnets are in existence to-day, so far as you know?

XA. Let me see now; I want to know whether you mean these magnets to apply to that particular loud speaker. There was only the one loud speaker. It could be rigged up with any one of those magnets if you liked. It did not matter a bit which of the magnets you used to rig up the loud speaker with, but we only had one loud speaker at a time.

XQ. 134. Which was it? You had several different sizes of sound-boards at different times?

XA. Yes, but the one I used was a 4-foot one.

XQ. 135. How many of these annular gap magnets are there in existence to-day?

XA. I know of several, and yet I cannot very well be said to know of any. I know of one that I have got at the [247] Works; I have got two at the Works; and I know, or think there are, some at Normanton with Sir Oliver. They are all about

(Deposition of Edward E. Robinson.)

the place; they have been lent. They were lent during the War, to, I think it was, Professor Bragg, for experiments during the War; nothing to do with telegraphy.

These magnets were made in various sizes. They varied in height and they also varied in diameter pretty well in every way. They varied in the amount of winding and the diameter of the inner core. They varied in the diameter of the internal gap from about $3\frac{1}{2}$ " to something like an inch or $1\frac{1}{4}$ ". They varied in every conceivable manner. I believe there is one of these magnets in the South Kensington Museum.

XQ. 140. Were these magnets used for any other purpose than for reproducing signals or speech?

XA. 140. Their principal use was for reproducing signals. Very little indeed as far as speech was concerned. They were mainly used for signalling purposes.

XQ. 141. Were they used entirely, or mainly, for producing sounds which were to be audible in a room?

XA. No. No. They were not used by any means mainly for speech. I would not say that was the chief use; the chief use was for working up the power to a sufficient degree to be able to record messages on ordinary telegraph tape. That was their principal use. As far as sound was concerned, I don't remember that they were used for that purpose to any extent.

(Deposition of Edward E. Robinson.)

XQ. 142. Except in the loud speaking experiments of which you have told us?

XA. Yes. As far as I remember it was more a receiver to do with telegraphy. You say that Paper deals with telegraphy and also loud speaking, but the main Paper concerns telegraphy.

The illustration in Fig. 5 on page 367 of the "Electrician" shows an accurate representation of the magnet structure used in [248] the annular magnet coil of which I have been speaking. The two magnets which I have in my possession are constructed in the manner shown in that Figure.

XQ. 145. In such a magnet is it desirable to have the inner pole of the magnet definitely retained in a concentric position so as to maintain an annular gap between it and the outer pole of the magnet?

XA. I don't quite understand what you mean. Yes.

XQ. 146. In the drawing before you, is the inner pole kept in position by the upper head of the spool of the magnet?

XA. No.

XQ. 147. How is it kept concentric?

XA. It is bolted on to a strong base.

XQ. 148. Will you tell me how the central bolting is done. Has this any relation to the outer pole?

XA. It is fixed by means of a bolt to a thick iron plate which forms the base of the magnet. You

(Deposition of Edward E. Robinson.)

see, there it is (pointing to Fig. 6). The base is connected to the outer pole by an iron casing.

XQ. 151. Mr. Robinson, would the loud speaker shown in Plff's. Comm. Ex. 1 operate as a loud speaker in the modern sense of the term?

(By Mr. Dyer Smith: The question is objected to as obviously hypothetical.)

XA. 151. Yes.

XQ. 152. To put the question in another way: If you fitted a sound-board to the magnet structure now in your possession, could it be used as a loud speaker?

XA. Yes. It could of course—as shown in the picture it would be rather a clumsy one, but it could be.

XQ. 153. If a modern cone was attached to the moving coil shown in that picture would you get satisfactory loud speaking from a modern wireless set? [249]

(By Mr. Dyer Smith: My objection is to be considered as continuing for all this type of questions.)

XA. 153. Yes.

Redirect Examination by Mr. Dyer Smith.

RDQ. 154. Mr. Robinson you answered in cross-examination that you rigged up the apparatus shown in Plff's. Comm. Ex. 1 as a loud speaker and that it functioned as such, if I remember. I am not sure that I remember whether you answered

(Deposition of Edward E. Robinson.)

definitely with regard to the time of any such demonstration as a loud speaker. Can you state, positively, and of your own knowledge, whether any such demonstration was before the lecture of 8th December, 1898, or not?

RDA. Not absolutely definitely, but I think there is not the slightest doubt that it was made up before that Lecture was actually given because there is a drawing of the loud speaker in the proceedings of the Society (Fig. 8 of the Institution Paper) and that would not be there if the loud speaker had not been actually constructed.

RDQ. 156. I understand you correctly then, do I not, that you have no positive knowledge that this device as shown in Fig. 8 was demonstrated as a loud speaker prior to 8th December 1898 at any place?

RDA. I have no definite knowledge. No.

Re-Cross Examination by Mr. Basil Drewe.

Fig. 8 of the Paper before the Institution of Electrical Engineers is the same as the drawing (Fig. 1) of the Patent Specification No. 9712 of 1898.

The same device is also shown in Fig. 12 of the "Electrician" on page 404. There is one thing about the whole of that, it does not show the coils. It shows the coil nowhere. It is an annular gap magnet. It obviously is the same also. Yes, they are the [250] same all through, of course. Fig. 2 of the Patent Specification No. 9712 of 1898 shows

(Deposition of Edward E. Robinson.)

the internal construction of a similar apparatus. I remember an apparatus being made similar to Fig. 1 of the Patent Specification with the internal arrangement shown in the lower part of Fig. 2. I remember that one together with the others. (Examination closed.) [251]

Deposition of

SIR OLIVER LODGE, F. R. S.,

residing at Normanton, Lake, Nr. Salisbury, a Scientist, aged 80 years and upwards, a witness produced on behalf of the plaintiff.

Direct Examination by Mr. Dyer Smith:

Q. 1. Sir Oliver, I believe I am correct in saying that you are a Fellow of the Royal Society; Doctor of Science of London University; that you hold various honorary degrees from various Universities; that you were principal of the University of Birmingham from 1900 to 1919; Professor of Physics, University College, Liverpool, from 1881 to 1900; Rumford Medallist of the Royal Society in 1898?

A. Either 1898 or 1899; I think it was 1898.

Q. 2. And that at other times you were President of the British Association in 1913; President of the Physics Society of London in 1899; that you were the Romanes Lecturer, Oxford, in 1903, and also that you were the Albert Medallist of the

(Deposition of Sir Oliver Lodge, F. R. S.)

Royal Society of Arts as a pioneer of wireless telegraphy in or about 1919?

A. Yes.

Q. 3. On 8th December, 1898, you read a Paper, did you not, before the Institution of Electrical Engineers in London on the subject of improvements in magnetic space telegraphy?

A. Yes.

Q. 4. I hand you a paper marked "Defs'. Ex. 6" which seems to be a partial copy of the Paper which you delivered on that occasion as printed. I take it that you recognize the Figures in this Paper, particularly Figs. 6, 7 and 8, as the illustrations used in that Lecture?

A. Yes.

Q. 5. Can you state whether the Lecture was illustrated by lantern slides, or whether you demonstrated actual apparatus, or both?

A. I don't think that I had my assistant up for this Lecture as far as I can remember and therefore I should be only taking lantern slides. Any demonstration I had given was in [252] Liverpool, but I took up lantern slides for this purpose and did not make an experimental demonstration.

Q. 6. Will you please look at Fig. 7 of this Paper?

A. Yes. I call that a sound-board telephone where I show the principle of the moving coil. The only thing I attached importance to was the moving coil in a magnetic gap. I don't call that

(Deposition of Sir Oliver Lodge, F. R. S.)

a magnetic speaker, I call that a sound-board telephone. That particular one would be one for applying my ear to, rather than as a loud speaker. A loud speaker would have a much bigger sound-board than that. In my Paper I believe I emphasized the size of the sound-board as an important part of the loud speaker.

Q. 7. Have you any clear remembrance whether one or more pieces of apparatus were actually constructed in accordance with Fig. 7?

A. I think it must have been constructed, otherwise it would not have been drawn here. I should think it was. I have no very clear recollection of that one. I think the signs are that it was constructed. "Another form was then made with a magnet specially designed as shown in Fig. 7." That is what it says there.

Cross-Examination by Mr. Drewe:

I have not looked recently at my Patent Specification No. 9712 of 1898. I see that many of these Figures have to do with the syntonic sort of tone telephone whereby a very feeble disturbance could be picked up and magnified by a succession of microphones, but they were mostly not for talking but for hearing a special tone. There was a tuning fork in some of them, so that it would not respond to any but a particular tone.

Q. 10. I appreciate that Sir Oliver. Can you tell me or not whether all the devices shown in those Figures were constructed?

(Deposition of Sir Oliver Lodge, F. R. S.)

A. It is difficult to know, but I know that the tuning fork one was constructed; Fig. 8 was constructed and several of these shown in [253] Fig. 6. No. III is very like Fig. 1. I do not know that it was constructed in precisely that form, but the principle of it was constructed. It was constructed as shown by the apparatus produced by Mr. Robinson. I don't remember IV being constructed. I remember I, II and III. I had them in my Laboratory at Normanton House for some time—a whole series of these, but I have not got them now because I sent them to the War to see if they would do for the sound detection apparatus. The gun location arrangements. There was a gun location arrangement; they tried to get a sensitive device for hearing and recording the sound of a gun at several stations simultaneously so that from the delay in receiving the signals at different distances, they could estimate the position of the gun. This sound location was very successful afterwards but they used a different microphone—a different receiving instrument—which was simpler and better than those I sent.

XQ. 14. I want now to refer you to two or three passages in the body of your Specification. I will ask you to read pages 4 and 5 of the Patent Specification, and also lines 43 to 45 on page 6.

XA. Very well. I am glad to have seen it again.

XQ. 15. Can you tell me now whether you made and used a device of the structure shown as No.

(Deposition of Sir Oliver Lodge, F. R. S.)

III of Fig. 7 and, if so, can you state the size of the sound-board D at any time?

XA. I don't discriminate between that III and Fig. 1. I certainly made a thing like Fig. 1.

XQ. 16. At that date, Sir Oliver; about the date of the Specification, or earlier, or later?

XA. What is the date of the Specification, 1898?

XQ. 17. April, 1898 is the date of the application, and the date of the complete Specification is 13th December, 1898; and your Paper is also December 1898.

XA. Well, all the experiments [254] were made about that time and the apparatus would be constructed before these patent drawings were made.

XQ. 18. The patent drawings were left with the complete Specification on the 13th December, 1898. Do I understand you to say that the apparatus in Fig. I would have been made before these drawings were prepared?

A. I should certainly say they were and I should say that they were produced before I gave the Paper at the Institution of Electrical Engineers.

XQ. 19. You see the parts marked little "f" in the drawings; do they serve to space concentrically the inner and outer pole pieces so as to maintain a definite annular air gap for the moving coil?

A. Yes; that is what they are for.

XQ. 20. Was not the said spacing means entirely mechanical to maintain the outer and inner pole pieces concentrically?

(Deposition of Sir Oliver Lodge, F. R. S.)

A. Yes. They were to make an annular space suitable for the coil to be in.

(Mr. Dyer Smith: The object of the Commission, as I understand it, is to enquire into the interpretation of Sir Oliver's Paper before the Electrical Engineers and into the accompanying circumstances. I therefore think that it is not in order to ask the witness to construe his Patent and I object to this series of questions and wish it to be understood that the objection is to be considered as continuing for all questions of a similar nature.)

Fig. 8 on page 839 of my Paper is similar to Fig. I of the Patent Specification. I find there the part little "f" which is brass. Yes, they were made the same way. The answers I have given you about my Patent Specification refer also to Fig. 8 of the Paper. I think the diagrams are practically identical. [255]

XQ. 25. Was not that a simple and well-known expedient for spacing the poles which had no electric or acoustic function?

A. I don't know that I quite understand that question.

XQ. 26. Had the part "f" any electric or acoustic function?

A. No.

XQ. 27. Was its purpose merely to position the poles?

A. Yes; you may see it in Fig. 9.

(Deposition of Sir Oliver Lodge, F. R. S.)

XQ. 28. Of the Paper?

A. Of the Paper. There are two poles; horse-shoe magnet and "f" is to hold the iron part G in position. The iron part G is called the keeper because it serves to carry the magnetic field from one pole to the other.

XQ. 29. Will you please look at the issue of the "Electrician" for 6th January, 1899, particularly Fig. 5 on page 367. Was such a device used to reproduce speech?

A. It is the same as Fig. 7 in the other one. Well, it was certainly made because it says here: "All the iron was well annealed; no attempt was made to subdivide the iron because eddy currents are all to the good. The coil was cemented direct to a wooden disc and by applying the ear to the wood, the first-made instrument on this plan was exactly as sensitive as the best of the usual patterns of telephone." So it was certainly used as a telephone.

XQ. 30. For reproducing speech?

A. For reproducing speech, but I should not call that a loud speaker.

XQ. 31. Would you look once more at the drawing, Sir Oliver? Do you see that actual dimensions are given?

A. Yes, several figures giving dimensions.

XQ. 32. Does the fact of the dimensions being given support your view that the instrument was in fact made?

(Deposition of Sir Oliver Lodge, F. R. S.)

A. Oh, I have no doubt it was made.

XQ. 33. Sir Oliver, in a device such as that in the Figure it [256] would be desirable, would it not, that the inner and outer pole pieces should be definitely retained in concentric position so as maintain an annular air gap for the moving coil?

A. Oh certainly the magnet portions would be fixed.

XQ. 34. Can you say how the sound-board is fixed in that drawing?

A. It seems to be fixed to a base-board.

XQ. 35. Would the base-board be metal?

A. Ah, I see now. There is an iron base at the bottom of it which is fixed to the base-board. The core is iron and the base is iron and the cylinder round is iron; it is all part of the magnet.

XQ. 36. Does the bolt which bolts the central core of the iron base-plate retain the central core concentrically within the outer pole?

A. Yes, it does. Quite firm.

Fig. 5 in the "Electrician" and Fig. 7 in the Paper I should not say were different. I think that Fig. 7 is the better picture, the shading is better, it shows that it is iron, whereas the other is left rather blank.

XQ. 38. On page 367 of the "Electrician" you stated, relative to the device shown in Fig. 5, that you considered as a syntonic receiver it was not successful. The fact that it was not successful as a syntonic receiver was no indication that it would not be successful to reproduce speech, was it?

(Deposition of Sir Oliver Lodge, F. R. S.)

A. No, I do not think so.

XQ. 39. Is it not a fact syntony is neither necessary nor desirable in a loud speaker?

A. Well, you don't want syntony in a loud speaker. You want all sorts of tones.

XQ. 40. Would not the fact that the said device was not successful syntonically indicate that it had characteristics which would make it successful as a loud speaker?

A. Well, I don't know about that, but I was thinking of a call for the syntonic telegraphy. [257]

XQ. 41. For that purpose?

A. For that purpose syntony was desirable. I was not exactly thinking of a loud speaker in connection with that arrangement. What I say is, that as a syntonic receiver it was not successful, the coil was too heavy.

XQ. 42. Now, Sir Oliver, would you look at the Figure again and tell me how the sound-board is supported?

A. Well, I take it that that sound-board is intended to be supported at the nodal lines judging by the letter-press.

XQ. 43. And what were its supports?

A. It was not clamped on its edge. I don't know what the supports were.

XQ. 44. You see on Fig. III the words "three supports" appear with an arrow. Can you explain what these were?

A. I don't remember the construction but it looks as if it were three pegs; three pins.

(Deposition of Sir Oliver Lodge, F. R. S.)

XQ. 45. Would the sound-board rest with its own weight on top of the three pegs?

A. I should think it was made rather more definitely placed than that. You see it has to support the coil and it would not do if it wobbled about.

I have seen the drawing produced yesterday by Mr. Robinson, Plff's. Comm. Ex. 1.

XQ. 47. Do you recollect an apparatus being constructed in accordance with that drawing?

A. I should not call it an apparatus; I should call it a temporary arrangement for a Lecture demonstration. After I had seen this drawing I remembered that kind of thing being shown at Liverpool. I had it in my Lecture room for showing to the students. It was rigged upon a Lecture table with a large board, 3 ft. or 4 ft. square, I should think, and with those adjustable supports holding it, but it was arranged for a temporary purpose. For the purpose of seeing how loud the speaker would be in the theatre. My recollection is that it was a big [258] theatre and you could hear it all over, but that we never got it so loud as one could speak. We got it loud enough to be audible, but not as loud as a man could shout. But what we got was the distinct utterance from it.

XQ. Sir Oliver. Mr. Robinson has told us that this apparatus was demonstrated at a *Conversazione* of the Midland Institute at Birmingham. Have you any recollection of that?

(By Mr. Dyer Smith: I object to the question as referring to something which, from the

(Deposition of Sir Oliver Lodge, F. R. S.)

previous witness's testimony, occurred years later than the Lecture of Sir Oliver before the Institution of Electrical Engineers, which therefore had no bearing on the subject into which we are supposed to be enquiring.)

XA. I did not go to Birmingham until 1900. The Midland Institute used to have a week's *Conversazione* at which apparatus was shown. Mr. Robinson was in charge of that apparatus and demonstrated it to the audience that came in, like they do at a *Conversazione* to hear what is going on throughout the week. It was soon after I had gone to Birmingham. It might have been 1900, 1902 or 1903; I could not say. I do not recollect any other occasions on which this apparatus was demonstrated.

XQ. 51. Was the apparatus shown in that drawing demonstrated to the Institution of Electrical Engineers when your Paper was read?

A. Well, I think not. I think that at the Institution I only had lantern slides.

XQ. 52. I think I ought to show you some remarks which were made during the discussion held after your Paper was read. If you will look at page 892 and page 911——

A. I should think that means that I had shown a telephone with a magnified tone. You see that was with the relay microphones. Well, I don't know what point it is you want there. [259]

XQ. 53. Having read those passages, do you

(Deposition of Sir Oliver Lodge, F. R. S.)

think that you made some demonstration when your Paper was read?

A. Well, it certainly looks as if I had shown the series, each telephone operating a microphone which passed it on to the next and so got a magnified tone at the end.

XQ. 54. Is that a series such as is shown in Fig. 6 of your Patent Specification?

A. Yes—I, II and III.

XQ. 55. What would the last instrument in such a series consist of?

A. I cannot tell. I see no reason why it should not be No. III.

XQ. 56. And No. III is similar to Fig. I of the Patent Specification?

A. Yes it is, but I have no recollection. It is only from what Mr. Sennett says.

XQ. 57. Sir Oliver, would you look just once more at Fig. 7 on page 838 of the Paper?

A. Yes.

XQ. 58. In 1898 did you have available such highly amplified voice currents as are now used in the output stage of a modern wireless receiving apparatus?

A. Well, we were nothing like so advanced.

XQ. 59. If an apparatus such as that shown in Fig. 7 was used attached to the output side of a powerful modern wireless receiver, would it not, in your opinion, give audible sound?

A. It would give audible sound, but it is not

(Deposition of Sir Oliver Lodge, F. R. S.)

adapted for speech. I think it is more adapted for a single tone.

XQ. 60. Sir Oliver, your paper says that it is not successful considered as a syntonic receiver?

A. That is referring to the coil. When the coil was attached to it, it put it out of tune.

XQ. 61. Do you not think that it would reproduce sound if used in place of a modern loud speaker?

A. Oh, yes; it would reproduce sound. [260]

XQ. 62. Which would be audible in the room?

A. I think it would be better if the board was bigger.

XQ. 63. But with the board as shown, would it be audible in the room, in your opinion?

A. I should say it would be audible in the room, but not very loud.

XQ. 64. Looking at Fig. 8 on page 839 of your Paper, would that device with a sound-board as indicated at E give loud sounds sufficient for all ordinary purposes if used in the place of a modern loud speaker?

A. Yes, I should say it would take the place of a modern loud speaker.

XQ. 65. And would be quite successful?

A. Judging by the results that I got at Liverpool it would be quite successful. It would not be very compact. In my Patent Specification page 4, lines 12 to 18 the statement is made that the sound-board might form a ceiling or board of a

(Deposition of Sir Oliver Lodge, F. R. S.)

public hall. By that statement I did not intend to exclude an ordinary sound-board. As shown in Fig. I and Fig. 6 of the Patent, the sound-board is not shown as physically supported.

XQ. 70. Would such support have been necessary if the sound-board did not form an integral part of the building?

A. Anyhow the sound-board would have to be supported somehow. It could not just float like this (demonstrating). One successful method of support is shown in the drawing marked Plff's. Comm. Ex. 1. In Fig. 7 of the Paper another method of support is shown. It is supported on three pins which rest on the magnet instead, as in the other drawing, on the table. I cannot say the pins were in any way connected to the sound-board. I should think that they may have been either screwed in or pegged in to the sound-board.

XQ. 76. If they were attached to the sound-board, would they also be attached to the magnet structure, or would they rest upon it? [261]

A. I would say—if I was making that apparatus now, I should fix it to the sound-board and to the magnet below. That is, I should have holes, into which to put the ends of those pins, but I do not know how it was made really. I didn't attach much importance to the way it was supported.

I identify the piece of apparatus referred to by Mr. Robinson in his evidence as being one of the

(Deposition of Sir Oliver Lodge, F. R. S.)
moving coil magnets I used in connection with these experiments. That was made prior to my paper before the Institution of Electrical Engineers in 1898. I should think it was made partly in preparation for that Paper. It has on the front of it, painted in white, the Roman numeral II. It looks as if it had been used for No. II in Fig. 6 in the Patent. The magnet structure shown in Fig. II of Fig. 6 is similar to—just the same as—that shown in Fig. III of Fig. 6.

(By Mr. Drewe: I introduce the magnet of which Sir Oliver Lodge has just been speaking, as Defs'. Comm. Ex. 1.)

XQ. 84. Was the loud speaker shown at III of Fig. 6 of the Patent Specification provided with a removable annular end, or pole piece?

A. You are meaning the brass "f". I don't know whether it was removable. Yes, I suppose it is removable here (pointing to Defs'. Ex. 1) but it just completes the cylinder.

XQ. 85. At the time of your Patent Specification what arrangement of sound-board was contemplated?

A. I do not think any special arrangement, as far as I remember. Any large surface of thin board would do.

XQ. 88. In your Specification you use the term "pure tone telephony" and the term "speech telephony." Will you tell us shortly what was the distinction?

(Deposition of Sir Oliver Lodge, F. R. S.)

A. For extreme sensitiveness and for magnification I considered that a pure tone would be best for getting the principle of acoustic resonance to work. For speech that would not be possible. [262]

XQ. 87. I will read you Claim III of your Patent Specification: "The method, substantially as set forth, of attaining forcible mechanical or acoustic vibrations from fluctuating electric currents by a telephone consisting of an elastically suspended movable coil, suspended in an annular or other suitable magnetic field, and connected with a sound-board, or its equivalent." Does that Claim define the loud-speaker device?

A. Yes, I should say it includes that.

XQ. 88. And you, in fact, made a loud speaking device within that Claim in or about 1898?

A. Yes.

XQ. 89. Sir Oliver, for identification purposes I want you to say whether these two letters are letters which you have written (handing letters to Sir Oliver).

A. They are both my letters, yes.

(By Mr. Basil Drewe: I introduce into evidence two letters written by and identified by Sir Oliver Lodge, as Defs'. Comm. Exhibits 2 and 3.)

Mr. Benjamin Davies, referred to in my Paper, was my assistant for many years. He is still alive and lives near Aberystwyth. I think it is quite possible that Mr. Benjamin Davies was present

(Deposition of Sir Oliver Lodge, F. R. S.)

when my Paper was read before the Institution of Electrical Engineers. He helped me with many of these series experiments. He would have been in charge of the apparatus. I generally used Mr. Robinson for Lectures, but Davies was specially connected with this investigation and he may have come up. I could easily ask him.

Redirect Examination by Mr. Dyer Smith.

RDQ. 95. Sir Oliver, I will try to make my re-direct examination as brief as possible to enable you to catch your train. Do I understand correctly that you have no recollection of the exact [263] form of device illustrated in Fig. 7 of your Paper, read before the Electrical Engineers, apart from what inferences you draw from reading the text of the Lecture, etc., and the "Electrician" publication?

A. Yes, I have to refresh my memory about things that happened 33 years ago. As far as any inference from the dimensions on Fig. 5 of the article in the "Electrician" goes, I think if I read the text adjacent to Fig. 5 in the "Electrician" it is pretty clear that the thing was made because I say "by placing the ear on the wood it was exactly as sensitive as a good modern telephone of usual pattern."

Whether the article in the "Electrician" was written by me, or authorized by me, or what relation it had to the publication in the Journal of the Institution itself, I cannot say. I did write for

(Deposition of Sir Oliver Lodge, F. R. S.)
the "Electrician" about that date sometimes;
whether I wrote this I do not know.

RDQ. 98. Referring again to the Paper as it appears in the Journal of the Institution, do I understand correctly, from the text accompanying or describing Fig. 7, that the sound-board was intended to be supported by supports which rested on the nodal circle of the sounding board?

A. They do not rest on them; they support the sounding-board at the nodal circle.

RDQ. 99. And in the Fig. 7 illustration the pins which are represented as supporting the sounding-board may be taken, you think, as being positioned at the nodal circle?

A. Yes, approximately so. The idea was to leave the disc as free to vibrate as possible; not to damp it unnecessarily.

RDQ. 100. That means, does it not, that the disc was to be free to vibrate as freely as possible when a single note was received by the apparatus so that the nodal circle would be in one fixed position which appertained to that particular note? [264]

A. Yes, that would be the primary object, but the same nodal position would come in for many tones. A disc supported at the notes for one tone would respond equally well to higher tones, for the higher tones might have the same nodes, with others supplementing them.

RDQ. 101. But there would also be various

(Deposition of Sir Oliver Lodge, F. R. S.)

other tones having wave lengths different from a multiple of the wave length of the tone for which the particular nodal circle was calculated, in which case the apparatus would not be well adapted to reproduce such tones. Is that not correct?

A. I don't think that one can say that would prevent speech from coming out of it. I judge from what I said here: "The coil was cemented direct to a wooden disc; by placing the ear to the wood the instrument was quite as sensitive as the best of the usual patterns of telephone." That looks as if it had been used as an ear telephone. That reference to sensitivity might refer to its reception of a single tone.

RDQ. 103. I am correct in understanding, am I not, that the entire description in your Paper refers to the use of the telephone as a syntonic receiver in connection with a space telegraphy system which you had invented and described in the Paper?

A. That was the special object of the communication to the Institution of Electrical Engineers, but it was not the special object of my patent.

RDQ. 104. No, I am referring solely to the Paper before the Electrical Engineers?

A. That had most to do with what I call tone telegraphy, of course.

RDQ. 105. You refer to a demonstration in a theatre at Liverpool: I understand correctly, do I not, that this theatre was not a commercial theatre

(Deposition of Sir Oliver Lodge, F. R. S.)

but was the theatre of your Physics Laboratory?

A. It was not a commercial theatre at all; it was the physics theatre in Liverpool University. [265]

RDQ. 106. Mr. Drewe asked you questions in regard to the observations of Mr. Evershed and Mr. Sennett in the Discussion of your Paper and he asked you whether you thought, after reading these remarks in the Discussion, that you had made some demonstration. Have you any direct recollection as to there having been any demonstration of apparatus at the Lecture?

A. I don't remember, but I think Mr. Benjamin Davies would be a good man to ask about that.

RDQ. 107. Did I understand you that Mr. Robinson was your Lecture assistant who had the usual duty of setting up apparatus for you in connection with Lectures?

A. Yes.

RDQ. 108. Referring again to Fig. 7 in your Paper, I understand you, do I not, that the pins shown as supporting the sounding-board were intended to be fixed rigidly to the sounding-board as described in the Paper?

A. I am not quite clear about that, but I think it is pretty clear that they were attached—both to the sounding-board and to the magnet below.

RDQ. 109. And the moving coil was shown as cemented to the sounding-board which would mean that a circle of the sounding-board corresponding

(Deposition of Sir Oliver Lodge, F. R. S.)
to the circumference of the moving coil was made rigid?

A. Made rigid?

RDQ. 109a. Yes; was made rigid; was held in fixed positions so that there would be no vibration in the circle, corresponding to the circumference.

A. Oh, no, I should not say that, the moving coil is to throw the board into vibration, and must do it by its attachment.

RDQ. 110. Is it not true then that the only portion of the board which would be free to vibrate, would be that between the circle in which the moving coil is attached and the nodal circle in which the pins are attached, with possibly some vibration beyond [266] the pins?

A. Oh yes, the whole of the board would be thrown into vibration by means of the vibrating coil attached to it.

RDQ. 111. This device was, however, intended to vibrate particularly for one given note?

A. Well, I think so. Yes, I think so.

RDQ. 112. Early in your examination by Mr. Drewe you stated, I believe, that this device, Fig. 7, was intended as a syntonie receiver, and later, in your examination by Mr. Drewe, when he was enquiring with regard to your results at Liverpool, and as to whether a modern similar apparatus would be successful, as a loud speaker, I believe you said that that was so as demonstrated by the results obtained at Liverpool.

(Deposition of Sir Oliver Lodge, F. R. S.)

I am correct in remembering, am I not, that you did not demonstrate the Fig. 7 form of device at Liverpool and I therefore take it that you were referring to a different form of apparatus at Liverpool?

A. Well, I don't remember using Fig. 7 for loud speaking purposes for transmission of ordinary speech to an audience. I don't remember it. (Examination closed.)

SIR OLIVER LODGE

recalled as a witness on behalf of plaintiff.

Direct Examination by Mr. Dyer Smith:

Q. 113. Sir Oliver, I understand that you wish to make some modification in, or addition to your testimony previously given; is that correct?

A. Yes.

Q. 114. Do I understand correctly that your remembrance of events previously testified to has been changed somewhat by the receipt of a letter from your late assistant, Mr. Benjamin Davies?

A. Yes. I didn't at first realize that in this matter Benjamin Davies had been my active assistant. I thought it had been Mr. Robinson, but Benjamin Davies had the matter of magnetic telegraphy [267] in hand and when I realized that, I wrote to him asking what he remembered about the meeting of the Institution of Electrical Engineers and whether he took up apparatus for

(Deposition of Sir Oliver Lodge, F. R. S.)

me and whether he made a demonstration. He has reminded me that we took up several pieces of apparatus and that, incidentally, we made a demonstration of what is rather incidental to the main subject that I was then speaking of, namely, of a loud speaker into which he sang a song. That has stimulated my memory although I had forgotten the incident, but I now remember his going back into an inner room while the audience waited and then from the board on the table came the strains of "Auld Lang Syne." I may say I clearly remember that that demonstration was made. I expect there were other demonstrations, but that I think was the chief one that you want to know about. I imagine that a large board was used because it would be most suited for the purpose and it would probably be supported as Robinson has testified, by upright pillars from the table because it would be too large to support any other way, I think. I am sorry I didn't remember it last time. I replied last time that I didn't remember any demonstration being made and that is what I want to correct.

Q. 115. You have no further actual remembrance of your own relating to this matter, I take it, Sir Oliver?

A. Well, that implies that my memory before was not my own.

Q. 116. No, sir, I didn't mean to imply that. I meant to ask whether you have anything further to add, with the qualification that what we want

(Deposition of Sir Oliver Lodge, F. R. S.)

is, of course, actual remembrance and not a matter of inference from anything you heard from Mr. Davies.

A. Yes. Well, what I told you was stimulated by what I heard from Mr. Davis, but I regard it as resuscitated memory, which I think it legitimate.

Q. 117. Quite so. That is all then, I think. [268]

Cross-Examination by Mr. Basil Drewe:

XQ. 118. Sir Oliver, you have told us you now remember a demonstration being given of a loud speaking apparatus when you read your Paper to the Institute?

A. In 1898?

XQ. 119. In 1898. Can you say whether the apparatus was of the general type represented by Def's. Comm. Ex. 1?

A. The apparatus would certainly consist partly of a magnet like the one exhibited, with an annular space in which the coil hung. That was of the essence of the invention.

XQ. 120. In addition to the magnet and the moving coil of which you have spoken there must have been a sound-board attached thereto?

A. Yes; there was a sound-board.

XQ. 121: Do you recollect the approximate size of the sound-board used?

A. I should say it would be about a square yard (demonstrating) and I expect it was made of deal. (Examination closed.) [269]

EDWIN S. PRIDHAM.

Direct.

I have examined the Lodge instrument which is now marked in this case Plff's. Ex. 13. This instrument is a device made, according to Sir Oliver Lodge's testimony, to use in his lectures. It is marked with the Roman numeral II. It indicates that it was exactly like the other instruments that were used in his so-called demonstrations. I would like to call attention to the fact that there was no spacing means within this cylinder such as Magnavox uses. The coil is loose in here, and would not operate to space the poles apart at all. This cap here, as far as anyone can tell, never had a sound-box mounted on it. Those two holes are for a spanner wrench to unscrew the top pole piece. The movable coil was put into the annular gap and moved up and down in there and was attached to a large sounding-board which was supported upon these retort stands, and not connected in any way to the casing, whatsoever.

Mr. LOFTUS: Would such a device as you have just described be susceptible of commercial manufacture, or shipment, or of use in a home?

Mr. MILLER: I object to that question as irrelevant, incompetent, and immaterial. We are using Sir Oliver Lodge as an exponent of the prior art to show what the prior art is. It makes no difference whether it could be used in a house or a home for domestic purposes, or not.

The COURT: Objection overruled.

(Testimony of Edwin S. Pridham.)

Mr. MILLER: Note an exception.

A. It would not, for this reason: The instrument Sir Oliver Lodge made in London and demonstrated in his lectures was a demonstrating device to illustrate a moving coil in a magnetic field. It operated so that a speech could be heard throughout a room (a theater, as he called it. He used the word theater in the English sense, meaning a lecture-room, as he states later on [270] in his deposition.) This instrument was not commercial in any respect that Sir Oliver Lodge demonstrated there. It had absolutely no means of holding a diaphragm as an integral part of the instrument. You could not ship it any place. Nobody could handle it except an expert. Experts set it up for his laboratory demonstration, and he demonstrated it. The efficiency of the Lodge instrument would be very poor, for these reasons: It had a wide air gap; it had no means of holding pole pieces in correct spaced relation. The diaphragm was not mounted upon one of those poles. The coil was in no way related in position with the air gap by any mechanical means associated with the instrument. Consequently, it would be very inefficient. His air gap is exceedingly wide, three-eighths of an inch, practically .375 of an inch, whereas in the modern instrument the air gap is .040 of an inch. It would take an enormous amount of wire for a magnetic field to get the same amount of density of magnetic lines in the air gap as is had with a very small

(Testimony of Edwin S. Pridham.)

quantity of wire in the present day instruments, or Magnavox. The efficiency of a dynamic speaker, as far as the magnetic structure is concerned, is figured in what we call watt pounds of wire; that is, you use so many pounds of wire and so many watts of current to produce a certain energizing force. With a very large magnetic field you either must use a great amount of copper, and if you have a wide air gap you must use a large amount of current. In Lodge's instrument, with an air gap that was practically 10 times as wide, or 9 times anyway, you necessarily, under the very smallest of conditions, would have to use 9 times as much power to energize that magnetic field as you would in the present day speakers with the same area of air gap. That would make the instrument very inefficient from a magnetic standpoint. [271]

In the Lodge device the only instrument which was illustrated as a loudspeaker consisted of a large sounding-board. This sounding-board was approximately four feet by four, as Sir Oliver Lodge testified. It was supported loosely upon tripods. There was not any periphery support to this diaphragm. It was supported in three places, three points. It acted as a sounding-board. It was very large. Some of his sounding-boards were made $\frac{3}{8}$ ths of an inch in thickness. We know by all rules of today that the efficiency of any speaker is determined by the weight of the vibrating system; the smaller the weight of the vibrating system the higher the efficiency. Dr. Lodge, in this instrument

(Testimony of Edwin S. Pridham.)

which he demonstrated to show the vibration of coils in magnetic fields, was not concerned with efficiency, at all; he simply wanted to set a large board in vibration. In the Magnavox instruments, the diaphragm is a light diaphragm; the coil is light; the diaphragm is a flexible diaphragm, corrugated for the very purpose of making it stiff in the center and flexible at the periphery. It is mounted completely around on the periphery in the rings which we term the soundbox of the instrument.

Q. The effect of that peripheral support is what in regard to acoustical results?

A. The effect of the peripheral support is exceedingly important in the reproduction of sounds. If the diaphragm is not supported continuously around on the periphery so that there is equal stress on the diaphragm throughout its support, we obtain what is known as blasting. Blasting is simply the unequal vibration of the material of the diaphragm, due to sound vibrations. This is shown very simply and easily in the laboratory with sand figures; if the diaphragm is not equally supported around the periphery, parts of the diaphragm are suddenly jumped into very violent vibration, higher than the rest of the [272] diaphragm. These sand figure patterns immediately spring out, and you can see what is the trouble and you can correct that trouble.

Q. You heard the defendants' expert, Mr. Fouts', use of the term "blasting" here the other

(Testimony of Edwin S. Pridham.)

day: Do you agree with his use of that term in the connection that he used it?

A. No, I do not. I think Mr. Fouts was most probably referring to resonance effects; that is, certain vibrations which are more powerfully produced than other vibrations due to the natural period of the diaphragm. Blasting has nothing to do with resonance effects. Blasting has to do with the unequal vibration of the diaphragm in different parts. It is very easily shown. Every laboratory for acoustical work is equipped with apparatus for showing the unequal vibrations of diaphragms.

Q. These resonance effects are in the nature of periodic vibrations?

A. They are periodic in a way, yes; they are recurrent. They are recurrent vibrations of parts of the diaphragm caused by a weakness in the diaphragm at that particular spot so it will vibrate stronger than the rest of the diaphragm. Consequently, if one part of the diaphragm is vibrating more rapidly or more strongly than any other part of the diaphragm, it immediately causes a mixture of the sounds. This mixture of the sound waves takes place within the diaphragm and causes this distortion of sound known as "blasting".

Q. The periodic vibrations or resonance effects occur just as often in the case of the large paper conical diaphragm as in the case of the smaller metallic diaphragm using a horn?

(Testimony of Edwin S. Pridham.)

A. I would say they do. That has nothing to do with the size of the material. Every material object that is supported in any manner whatsoever must have a natural frequency of vibration. We have heard a very great deal about free cones, or freely- [273] supported cones: There is nothing like that in the industry. Every cone has a support; it must have a support or it could not stay in space. That support, no matter what it is made of, has a certain resiliency. Defendants' speaker has a resilient spring mounting at the apex of the cone to hold the coil in the air gap. This resilient mounting, of course, gives a springy effect to the cone when it is vibrating. You may say that it does not amount to very much: It amounts to enough to give a very definite resonant frequency to the cone. That is one of the great troubles in making dynamic speakers; this natural frequency of vibration that is present in all speakers.

Now, there is another type of diaphragm which does not exhibit this to so large a degree in the useful range of broadcasting; that is the small diaphragm which is coupled with an exponential horn. The smaller the diaphragm the less the mass; consequently, the higher the natural period of that diaphragm. If this natural period is above 10,000 cycles, it does not affect the reproducing to any great extent. These smaller diaphragms with horns are now developed so they will produce frequencies from 16 cycles a second up to 10,000 cycles a second,

(Testimony of Edwin S. Pridham.)

with practically no distortion. The cone acts like a piston, just as the diaphragm acts like a piston; it pushes air out in front of it, it compresses the air in front; it does not act as a piston purely and simply. A piston is something that moves to a certain place and stays there; it does not come back. In any one of these speakers, if you push the diaphragm out a little it will come right back to its proper place. Diaphragms that have been very flexibly supported at the periphery have been known and used for many years. A large cone does not move bodily under all frequencies, any more than a small diaphragm will move bodily. [274] The higher frequencies vibrate the cone near the center; the lower frequencies will vibrate the cone practically as a whole. For the general broadcasting frequencies, the cone does not move as a unit. Johnsen Patent 1,075,786 shows no spacing means within the casing that he has. Another thing about the Johnsen patent is simply this: That that hemispherical coil that Johnsen uses in the only figure in which he showed a horn or a diaphragm for reproducing acoustical vibrations, that coil is wound with layers of wire and the magnetic elements are inserted between the layers. It states so very definitely in the specification. If there were iron elements inserted between the layers of the winding, it would be a magnetic speaker and not a dynamic speaker. The iron would be magnetized by these currents going through that coil and immediately would be pulled

(Testimony of Edwin S. Pridham.)

over with terrific force to close the air gap, like an ordinary magnetic armature would close an air gap.

Mr. LOFTUS: I offer in evidence the chart that the witness has referred to during his explanation of the prior art.

(The chart was marked "Plff's. Ex. 16.)

Q. In discussing sound-boxes in their various forms, as you did a while ago, can you refer to any authorities in support of your definition?

A. Yes. Besides the patents to Lumiere which have been admitted in this case, I believe I have before me a page taken from a book by Dayton C. Miller, of the Case School of Applied Sciences, at Cleveland. Dayton C. Miller is a recognized authority on acoustics, especially on musical sounds. He has written a book called "The Science of Musical Sounds." He goes into that quite thoroughly. This book was published in 1916. I have here a photostat of Page 155 of that book, which illustrates various types of diaphragm mountings. He says: [275]

"In the early experiments it was thought desirable in order to protect the diaphragm from the indirect sounds to enclose it in a housing."

That is a diaphragm housing.

"Various shapes and sizes of front and back coverings are shown in Fig. 121."

(Testimony of Edwin S. Pridham.)

These are the diaphragm mountings of various sound boxes. At the end of the upper row of figures, there will be shown a diaphragm housing with a ferrule extending the complete extent of the diaphragm. Others have smaller openings. At the extreme right, between the two rows, there is a mounting of a diaphragm which Miller calls a diaphragm housing. It simply shows two peripheral rings similar to the rings that Lumiere shows in his device. In the lower figure the fronts are all open. Various types of backs are used.

Now, in regard to this particular drawing I would like to call attention to the fact that conical diaphragms were well known in the art. One of the very earliest patents we have is the British patent to Siemens, in which he shows a conical diaphragm attached to a movable coil. The diaphragm is in a housing, a wooden box. I would like to call particular attention to that patent, because it is the earliest on record, the Siemens British patent. I am just going to show a conical diaphragm mounted in a housing, as Miller shows in his drawings. In Siemens, in Fig. 6, we have a conical diaphragm mounted in the wooden box. There is a movable coil attached to that diaphragm. Here is a wooden box here *with* Siemens calls simply a box for supporting a diaphragm. A conical diaphragm in any one of those sound-boxes would of course then be the perfect equivalent of a flat diaphragm. There is no question about that. Also

(Testimony of Edwin S. Pridham.)

there may be some doubt as to whether Dayton C. Miller referred to a sound-box in those things. [276] He calls it a housing. On Page 156 of Dayton C. Miller he describes the various types of horns which go on these various diaphragm housings. He states:

“A horn as used with instruments for recording and reproducing sound is usually a conical or pyramidal tube, the smaller end of which is attached to the sound-box containing the diaphragm.”

That occurs on Page 156 of Dayton C. Miller's article. On Page 157 of the same book are shown various types of horns with all sorts of apexes—large apexes and small apexes. These horns were supposed to go on these types.

Mr. LOFTUS: The photostat the witness has just referred to has heretofore been marked “Plff's. Ex. 7 for Identification.” I would like to offer it at this time. Also to have the Dayton C. Miller book not offered in evidence, but merely marked for identification. I do not believe it is necessary to offer the entire book. We have a photostat of the pertinent page. The witness has read from other pages which go to explain his testimony.

The COURT: You are offering a photostat of Page 155?

Mr. LOFTUS: Yes, your Honor.

The COURT: That may be admitted in evidence.

(The document was marked “Plff's. Ex. 7” in evidence.)

(Testimony of Edwin S. Pridham.)

Mr. LOFTUS: I ask that the Dayton C. Miller book to which the witness referred be marked for identification.

The COURT: It may be marked.

(The document was marked "Plff's. Ex. 17 for identification.")

A. In the art of reproducing sounds, many various types of diaphragms and sound-boxes were used. Conical diaphragms, as I said a moment ago, were very old in the art. The patent to Dann and Lapp shows a conical diaphragm. The patent to Dann and Lapp is No. 338,660, patented March 23, 1886. It shows a conical [277] diaphragm in a ring peripherally supported, and mounted upon a flat board. The patent to Duwelius, No. 674,575, was issued in 1901. This shows a diaphragm mounted in a support or a housing in which the tubular opening or ferrule extends over the greater part of the area of the diaphragm. In this patent also are shown types of horns with large openings at their apex to fit upon this particular sound-box housing; Fig. 8 especially of this patent shows two horns, one on the front and one on the rear side of this soundbox housing, showing that there is no constriction whatsoever of the top plate in the so-called sound-box. There is a patent to Shanks showing a very large diaphragm supported in rings, which was used for a phonograph without a horn. This patent is No. 822,024, patented May 29, 1906. The patent to Lumiere, 986,477, pat-

(Testimony of Edwin S. Pridham.)

ented March 14, 1911, calls particular attention to one of the objects of his invention, being a sound-box. He states in line 27, page 1, as follows:

“The invention also relates to the sound-box in which the diaphragm is mounted.”

The next Lumiere patent to which I refer and in which the sound-box is used is Patent 1,036,529, patented August 20, 1912. In this he also refers to the object of his invention. He says in line 30, page 1:

“My invention also relates to the sound-box in which the diaphragm is mounted.”

In order to show that this term was not used as a misnomer, all through the claims of his patent the very thing he claimed was and he uses the term “sound-box.” In Claim 2, for instance, he says:

“In a sound-box the combination of a diaphragm and means to hold said elements in a flexed position.”

In Claim 5 he says, “In a sound-box.” Then further on, Claims 27, 28 and 29 all refer distinctly to this particular combination of a sound-box and other elements. [278]

In two patents to Lumiere the term “sound-box” is used to describe a flexible, quasi-conical diaphragm which is mounted in rigid rings which he accurately describes and numbers. In this particular patent he describes the sound-box as the

(Testimony of Edwin S. Pridham.)

mounting, and shows it clearly in the drawings and the numerals, attached to parts of the drawings. Lumiere was not an ordinary unskilled workman, or a man unacquainted with his language. He was a very famous scientist and physicist. He received many distinguished medals for his work. He knew what he was talking about. The Patent Office allowed him these patents when he used the term "sound-box."

I would also like to refer to a patent to Stroh, a British patent, No. 3393, issued in 1901. Fig. 1 shows a conical diaphragm mounted in a diaphragm housing. This particular conical housing that he shows has a peripheral ring of great flexibility, shown in Figs. 2 and 3 of this particular drawing. All these patents that I have been referring to relate to diaphragm housing or sound-boxes and conical diaphragms or quasi-conical diaphragms, such as Lumiere used.

The Johnson patent 1,180,401 is for a cup-shaped or cone-shaped diaphragm which is used in a diaphragm mounting. It has a flexible peripheral rim attached at the edge of the conical part. It is described very clearly in the specification as a disc of conical shape which will vibrate bodily as a whole with the flexible peripheral support. Reading from the specifications:

"Generally stated, the form of this invention hereinafter described provides a flat, annular, vibratory flange, to which is secured a

(Testimony of Edwin S. Pridham.)

bulged or conical substantially inflexible major portion adapted to reciprocate as a whole within the engaged peripheral edge of said annular flange.”

This patent was issued April 25, 1916. [279]

I think those are all the patents to which I care to refer which illustrate conical diaphragms, diaphragm housings, and sound-boxes.

Mr. LOFTUS: I offer in evidence the book of patents referred to by the witness in his answer as illustrating his explanation of the various forms of sound-boxes, diaphragms, etc., as follows:

Maxwell	216,051	June 3, 1879
Dann and Lapp	338,660	Mar. 23, 1886
Duwelius	674,575	May 21, 1901
Shanks	822,024	May 29, 1906
Lumiere	986,477	Mar. 14, 1911
Lumiere	1,036,529	Aug. 20, 1912
Johnson	1,180,401	Apr. 25, 1916
Stroh (British)	3,393	1901

(The document was marked “Plff’s. Ex. 18.”) [280]

Q. Will you point out, Mr. Pridham, wherein there are any similarities or dissimilarities as between the disclosure in the British patent to Siemens No. 4685 and the subject-matter set forth in Claim 8 of the first patent in suit?

(Testimony of Edwin S. Pridham.)

A. In the Siemens British patent there is shown in Fig. 6, and also in Fig. 5, a magnetic field, a vibrating conducting coil rigidly attached to a diaphragm, the coil disposed in the field. However, I fail to find any connections whatsoever to the movable coil which is represented by the letter A in this device. It shows no connections whatsoever leading from the coil to an operating circuit. There are many movable coils operating in a magnetic field in which the operating wire is led right off the coil to the operating circuit. However, in Claim 8 of the Magnavox patent No. 1,266,988 we have this particular combination. We have a moving coil—I will read the claim: “In a receiver for telephony, the combination of a sound-box and its diaphragm, of a magnetic field, a vibrating conducting coil for the telephonic currents disposed in said field, and rigidly secured to the diaphragm.” Now, so far as Siemens shows that combination. Now, I read further: “and connections between said coil and the operating circuit comprising thin metallic strips secured to the diaphragm.” Siemens does not show that element in this patent. Therefore, I take it that the Siemens patent does not read on the Magnavox patent, Claim 8.

Q. Have you made any charts illustrating the purpose and operation of the securing of these lead-out strips to the diaphragm, and if so, please refer to them in connection with your answer.

(Testimony of Edwin S. Pridham.)

A. I have made a chart. I sketched the idea in pencil and had the draftsman draw it up according to my direction. In the top figure is shown an illustrative drawing of the [281] Magnavox Claim 8. It shows a vibrating coil disposed to be vibrated in the magnetic field. It shows the fine wire of the movable coil attached to the diaphragm. It shows connections between the coil and operating circuit which are attached to the fine wire of the movable coil where these fine wires are attached to the diaphragm. The practicability of this scheme is that the fine wires flex with the diaphragm, and the flexible operating circuit wire is attached to these fine wires where those fine wires flex with the diaphragm, consequently avoiding breakage.

In the middle drawing is shown a diagram illustrating the method in which the operating circuit wires are brought out from the coil of the Stromberg-Carlson instrument. We see a coil vibrating in the magnetic field. This coil is wound with fine wire. The terminals of that fine wire are attached to the diaphragm. The operating circuit wires which we call connections between the coil and the operating circuit are attached at this point to these wires.

In the Atwater Kent drawing, or the drawing which illustrates the method in which Atwater Kent uses this idea, we have a vibrating conducting coil for telephone current disposed in the magnetic field.

(Testimony of Edwin S. Pridham.)

The fine wire of the coil is attached to the diaphragm, the connections between the coil and the operating circuit are attached to this fine wire at some point where the fine wire is attached to the diaphragm.

Mr. LOFTUS: Mr. Pridham at the time of the noon recess was discussing the subject-matter of Claim 8 of patent No. 1,266,988, and made various references to a chart. I now offer in evidence the chart.

(The chart was marked "Plf's. Ex. 19.") [282]

Q. Will you state concisely, Mr. Pridham, what, if any, new result over the prior art that has been referred to here was accomplished by either of the two patents in suit?

A. A very distinct new result was accomplished in producing a mechanical instrument in which the vibration of the movable coil could take place in the magnetic field with sufficient amplitude to create a very large amount of sound, so that the operating circuit to the coil would not be broken. That was the new result obtained under claim 8 of the first patent. The decidedly new result obtained by us from the invention as represented in the other patent was the development of a loud-speaker which was commercial in all its forms; it permitted a very great amplitude of movement of the movable coil; it permitted commercial operation and shipment of the instrument; it per-

(Testimony of Edwin S. Pridham.)

mitted the instrument to have great acoustical efficiency and mechanical efficiency. In fact, it was a successful instrument from the standpoint of commercial use. The fact that the pole pieces were held in spaced relation within the casing and a flat plate was used as one of the poles and the sound-box with its diaphragm was mounted on one of those poles to be in steady fixed relation with the concentric air gap gave us an instrument which had not been produced before, and it produced an entirely new result that had not been produced before.

Q. Prior to these inventions disclosed in your two patents, what, if anything, was commercially in use to your knowledge in the way of a telephone receiver or loudspeaker suitable for this purpose?

A. There were in use at the time we were working on these loudspeakers various types of magnetically-operated loudspeakers which consisted of a magnetically-operated armature [283] which was attracted to the poles which were part of a magnetic structure. The telephone current went through these energizing poles of the magnetic structure, and attracted the iron armature to the pole pieces. That was generally known as a magnetic type of armature. There were several of those on the market. I have seen a number of them in operation.

Q. Were they or were they not satisfactory?

(Testimony of Edwin S. Pridham.)

A. I think they were not satisfactory. That is my personal opinion as a person well versed in that art. They would reproduce sound. They were never used with any great commercial success that I know of. I saw installations in the White Sox Ball Park in Chicago. I saw installations of these particular instruments in the Morrison Hotel. They never did supply what I thought, and what a great many other people, I imagine, thought was a commercially successful loudspeaker.

Q. To what extent, if you know, are such magnetically-operated annunciators or loudspeakers used at the present time?

A. I would say from a percentage standpoint that they are practically obsolete. I do not believe there is one-tenth of one per cent. of the loudspeakers on the market today operated by a magnetic armature.

Q. Are you able to tell us the number of devices of the dynamic type manufactured under the two patents here in suit which have been made and sold by the Magnavox Company up to the present time, or say up to the first of the year?

A. Yes, I am. I have a résumé of the sales made which I would like to read. The total number of units sold up to the first of 1932 was 1,490,237 for a total amount or sum of \$13,931,965.65.

These figures do not include devices made by our licensees. They are figures that were obtained from

(Testimony of Edwin S. Pridham.)

the books of The Magnavox [284] Company, of units made by The Magnavox Company. The Magnavox Company has sold loudspeakers of the dynamic type to defendant Stromberg-Carlson Company. They sold loudspeakers to the Stromberg-Carlson Company in the year 1928, to my personal knowledge. The type of loudspeaker so sold to Stromberg-Carlson Company was like the instrument in evidence in *The Magnavox Co. v. Hart & Reno*, marked Plff's. Ex. 5 in that case. (Said device was then offered in the present cause and marked Plff's. Ex. 20.) The drawing which you have shown me is a correct drawing of the Magnavox instrument which has just been offered in evidence as Plff's. Ex. 20. (Thereupon the said drawing was offered in evidence and the same was marked Plff's. Ex. 21.) I am familiar with the suit of *The Magnavox Co. v. Frederick H. Thompson Co.* The device in that suit was known as the "Majestic" device. I have a copy of a license entered into between The Magnavox Company and the Grigsby-Grunow Company, manufacturers of the Majestic device, which I present herewith. (The same was offered in evidence and objected to as immaterial, irrelevant and incompetent and not binding on the present defendants. Objection overruled and exception noted. The document was then marked Plff's. Ex. 22.) [285]

(Testimony of Edwin S. Pridham.)

Cross-Examination by Mr. Miller.

The first machine made according to the drawings and description of Patent 1,266,988 sold, was in 1916, to a "magician" called Alexander the Great. He used it in his act. It had the form of a coil shown in the drawings of this patent; that is, wedge shaped. It had the device marked "27" in the patent drawings. It was the same as Defs' Ex. A with the exception that the coil was wedge-shaped or comb-shaped and the identical kind of strips that were used on the diaphragms might not have been exactly the same. The connections between the coil and the operating circuit were substantially the same as shown in Exhibit A. The ends of the connections leading from the coil were attached to binding-posts. They were bent over before they got to the periphery.

We sold a great many instruments of that kind—I would not say a great many as figured according to our present production, or anything like that, but we sold a number of instruments from 1916 to 1918 embodying this wedge-shaped coil, and also embodying the operating circuit wires which were connected to the moving coil wire.

Q. You say in this patent, beginning at line 27, page 2:

"Thin metallic strips 27 are glued to the diaphragm with shellac or other suitable substance, and insulating material 28 in addition to the shellac may be laid between the metallic strips and the

(Testimony of Edwin S. Pridham.)

diaphragm. The said strips 27 are secured at their inner ends to the fasteners 24 on the diaphragm, and extend radially outward to the periphery of the diaphragm, where they are projected downwardly and attached to binding posts 29 secured to an insulating block 30 on the sound-box." I assume that is substantially the same construction that is shown in this model, [286] Defs'. Ex. A, that I have just shown you.

A. That is correct.

Q. You say those were the strips that were used to obviate the breaking of the former strips or the former connections that had been used.

A. That is correct.

Q. What were the other connections that you used and which you found would break?

A. The other connections which we used up to this time were the wires of the coil, itself. These wires of the coil, itself, were led out to binding posts, and then the operating wires were connected there.

Q. And you found in practice that they broke?

A. Yes, invariably they broke after a few hours' use.

Q. And you substituted for these round wires the devices shown in Fig. 9?

A. Yes, we substituted for the round wires of the movable coil the thin metallic strips which are shown in the patent.

Q. When you were referring in the specifica-

(Testimony of Edwin S. Pridham.)

tion to thin metallic strips, what devices were you referring to?

A. We were using practically any conductor that could be glued to the diaphragm.

Q. No, it does not say any conductor; it says "thin metallic strips." Those were the devices 27 in the drawing?

A. Yes.

Q. The expression "thin metallic strips" would be an apt designation of those devices 27, would they not?

A. Yes, they would. Do you wish me to tell you what we actually used in our instruments?

Q. No. I am asking you about this patent, and what you used in the machine sold to Alexander the Great.

A. In that particular machine I am quite sure we used the strips as shown in the exhibit that you just showed me. [287]

Q. After the sale of this machine, do you know who got the next one?

A. We sold quite a number to a company that was interested in religious propaganda here in San Francisco. I have forgotten what the man's name was. He had a truck and gave religious talks, talking into a transmitter, and the Magnavox instrument would reproduce his voice. He would give sermons to crowds.

Q. Out in the street?

A. Out in the street, yes.

(Testimony of Edwin S. Pridham.)

Q. Of the total number of machines that you sold, how many were constructed mechanically like the drawings shown in this patent and containing the strips 27 and the wedge-shaped coil?

A. Constructed mechanically like the drawings shown in the patent, and also containing these strips, I imagine we sold 200 altogether.

Q. Over what period of time did that extend?

A. That extended from 1916 to 1919.

Q. Did you make any change in 1919?

A. We did make a very great change in 1919.

Q. What change was that.

A. We changed from the comb-shaped coil to the cylindrical coil.

Q. What was the reason for that change?

A. The reason for that change was this: We found that in shipping these instruments which were constructed according to the first patent, the mechanical construction was such that the coil would not stay fixed, the air gap would not stay fixed. It was a horseshoe magnet and we had quite a bit of difficulty in the mechanical stability of the instruments. They would work perfectly in the laboratory and for demonstration. As a matter of fact, we sold about 200 of them altogether. They were not the mechanical type to stand up. They were the horse-shoe electromagnet type and we discontinued that type after making about 200 from 1916 to 1919. The instruments that followed had a cylindrical pot and a cylindrical core. [288]

(Testimony of Edwin S. Pridham.)

From 1916 up to 1919 we sold the form as mechanically shown in the drawings of Patent 1,266,988. After that we manufactured and sold the form illustrated in the second patent in suit, No. 1,448,279. It would be difficult for me to say exactly the first date that we sold this latter type, but it was some time in 1920. We have continued to sell this type of machine up to the present time. It is the electrodynamic type, as shown and described in the specifications of our second patent. We commenced to sell the type of machine in which we used the conical diaphragm and a dynamic drive, in the Fall of 1926. Up to that time (1926) the number of loudspeakers of the type shown in the second patent in suit sold by Magnavox Company was about 400,000. The remainder of the 1,400,000 machines mentioned by me would be of the type containing the conical diaphragm. From the time we commenced to sell the conical diaphragm type there were many loudspeakers on the market using conical diaphragms. As I recall it, Farrand put out a conical-type diaphragm. Magnavox itself put out a conical diaphragm speaker in 1924, but it was not of the electrodynamic type. The Radiola 104 came on the market, as I remember it, in the Summer of 1925. That was the first one I saw. I saw that at a demonstration given by Sherman, Clay & Company in Oakland. Others using conical diaphragm machines prior to the time or at the time

(Testimony of Edwin S. Pridham.)

when Magnavox Company began to put them on the market were the Rola Company—I believe the Stromberg-Carlson Company had a conical diaphragm loudspeaker on the market at that time. The Boco loudspeaker was a conical diaphragm loudspeaker put out in 1924 or before. There were maybe 20 or 30 different types of the conical diaphragm on the market before Radiola 104 came out. That was not before we put our conical type diaphragm out. We put out our conical-type diaphragm at about the same time as [289] these others. However, I wish to call your attention to the fact that the conical diaphragm type that we put out was a magnetically operated loudspeaker. We put that on the market until 1928. Then the tremendous desire for electrodynamic speakers made those magnetically operated cones obsolete. They are practically obsolete now.

As to what the apparatus shown in the various photographs produced by me consisted of, in the earlier experiments and demonstrations, it generally consisted of a microphone transmitter like we talk into on the ordinary telephone, only that it is able to stand much heavier currents, a storage battery, a transformer, and a loudspeaker.

The loudspeaker had to be at some little distance, maybe 25 or 30 feet, away from the orator, either above or at one side, so as to prevent reaction between the loudspeaker and the microphone. The microphone and the loudspeaker were connected by

(Testimony of Edwin S. Pridham.)

telephone wires. Plff's. Ex. 9, Picture No. 1, is of President Harding talking to a large crowd. He is talking into a microphone transmitter. The loudspeaker is probably above the canopy there above his head. He talked through the microphone and that passed the sounds over the telephone wires to the horn, and the sounds were emitted from the horn. In all those pictures that is the same procedure. The horn was about 22 inches in diameter (that is, the bell) and was about 5 feet long. That system of public announcing wherein a speaker could address large crowds of people was new. The general train announcing and hotel announcing, like paging, had been done to a certain small extent, as I outlined before. Public address work, wherein a speaker could talk to 25,000 or 30,000 people was new. It was the first time it had ever been done, when Magnavox achieved it. It [290] is rather difficult to do that; that was the problem we solved. Many times we connected four or five horns in multiple in order to cover large crowds.

I spoke of making some experiments at Napa; that was in 1911 and the instrument we used was a wire tightly stretched in a magnetic field. We used a sort of a frame of wood with a peripheral electro-magnet behind it. Between the top of the frame and the bottom there was stretched a copper wire, and to that wire at the center there was attached a match. At the end of the match there was attached a diaphragm. That instrument was connected by

(Testimony of Edwin S. Pridham.)

a circuit to a little out-house about 200 feet away, and Mr. Jensen went out to the out-house and spoke into the transmitter and I listened at this reproducer. The reproducer produced his voice very clearly. We used a microphone and the operation was substantially the same kind of an operation as is shown in the photographs where we used the microphones and horns. We performed innumerable experiments to try to build up this reproduction so it would be as successful as the ordinary telephone receiver. Our next step was to couple a number of these "strings", as we called them, together, and through a system of leverage connect them to one diaphragm, because the greater the length of the conductor in the magnetic field the greater the force acting on the diaphragm with a certain current. We made quite a number of these instruments. Then we made a coil instrument wherein these wires were all formed into a rectangular coil. We applied for a patent on that particular instrument in 1912. That instrument used the horseshoe electromagnet, sound box and diaphragm with ear tubes connected to it. That was used on the telephone line. That was the first patent, No. 1,051,113, January 21, 1913. We used many and [291] various types of diaphragms; some of mica; some of metal; some of fiber; any non-magnetic diaphragm was used. We did not make or sell any of the devices shown in this Patent 1,051,113. We did not make or sell any machines under

(Testimony of Edwin S. Pridham.)

this next Patent No. 1,088,283, of February 24, 1914. It shows a rectangular coil which was mounted for oscillatory motion. It moved around a pivot like the ordinary ammeter winding of today. It did not move up and down like the present coil, but operated back and forth. It was pivoted at the center. It shows the pivot very clearly in the patent. We made perhaps 5 or 10 of these machines, but we did not sell any of them. They were merely for experimental purposes. I remember Patent 1,105,924 of August 4, 1914 very well. That patent was exceedingly important in the art. We used it to a very great extent in our work. The specification tells there about the necessity of eliminating the hum of the magnetic field due to the rectified or other impure direct current. We sold a very large number of machines of that type, but not at that time. I refer to the use of that in much later work on dynamic speakers. I mean we used some of the feature of this patent in our subsequent dynamic speakers. It had a moving coil, substantially the same as our present moving coil. It is an annular coil. There is an annular air gap. It is a narrow air gap. I notice in the drawings quite a clearance between the coil itself and the side of the device. In another drawing there are two air gaps, so that so far as the magnetic efficiency goes it was not very good for that. However, it was for a different purpose entirely.

Q. Was that because the gap was too wide?

(Testimony of Edwin S. Pridham.)

A. I imagine so, yes.

In this Fig. 3 there is quite a wide gap there; also in [292] Fig. 2. We were not attempting in that particular device to make a loud speaking telephone. That was a telephone receiver which was operated with ear tubes. We had to use an air gap and a coil within the gap, and I imagine that we understood at that time that the gap should be narrow in order to be efficient. I would say that for an efficient instrument it ought to be narrow; yes. I imagine we could see by looking at it right away that the gap was too wide. I imagine that any electrician, seeing a wide air gap and being acquainted with the situation, would know that he could make it narrower. It is easy enough to make the gap narrow; it is hard to keep it narrow.

The machines which we sold under these two patents prior to the time that we began the selling of the conical diaphragm type in 1926, were equipped with horns. The object of having a horn was simply to direct the sound out so that people could hear it. The tapering end of the horn was connected to a ferrule on the soundbox.

Q. The horn does something besides directing the sound, does it not?

A. The horn forms a cone of air, the apex of the cone of air resting on the diaphragm, and the diaphragm pushes the cone of air out through the horn. The large bell-shaped part of the horn acts like the base of a cone. Consequently, the dia-

(Testimony of Edwin S. Pridham.)

phragm can get more air into vibration in that manner than with just a small diaphragm.

Q. There is quite a difference in the operation of one of these machines with a horn and one without a horn, is there not, or rather, there would be?

A. Yes. If you take a small diaphragm and leave off the horn you get very little air into vibration.

Q. You would not get as much as you needed to produce your [293] result, would you?

A. No, not at all.

Q. The horn has some influence upon the tone quality does it not?

A. A correctly-designed horn should have no influence on the tone quality. It should neither add to nor detract from the sounds.

Q. Does not the horn add its own natural period effects to the sound?

A. It is very undesirable for it to do so. Some types of horns may add their natural frequency. For instance, if you have a long horn, like a tuba, and a compressional wave should go through that tube, you would get the natural frequency of the length of that horn.

Q. Do you often notice in the reproduction of phonographs that there is a kind of a tinpanny sound mixed with the music?

A. Not properly constructed phonographs. The old type phonographs used in 1910 might, but in 1915, or 1920, I would not say they had a tinpanny

(Testimony of Edwin S. Pridham.)

sound, because there was a different type of diaphragm used.

Q. Would you agree with this statement: "A horn used in connection with a diaphragm greatly increases the response but it also adds its own natural period effects, which are quite complex." Is that true?

A. Not wholly. I believe the first part is true, but the latter part I have not found to be true in my experience, for this reason, the horn can be made so that its natural frequency of vibration is below any period used in the reproduction. When they are constructed in that way the horn has absolutely no effect upon the sound reproducing effect to increase the volume of air set into vibration.

Q. Would you agree with this statement: "That when a horn is added to the diaphragm the response is greatly altered"?

A. Yes, I would agree to that [294]

Q. But you would not agree to the first statement I made, would you, that the horn adds its own natural period effects, which are quite complex?

A. No, I would not agree with that if the horn is correctly constructed. Of course, you can produce a horn which will do that, and which will be very complex.

Q. Now, will you please turn to page 158 of the book by Dayton C. Miller, which you referred to, and see if that statement is not taken from that book?

(Testimony of Edwin S. Pridham.)

A. Yes, it is taken from that book.

Q. I understand that a horn has vibrations of its own, and when you send sounds through that horn it stirs up those natural vibrations in the horn, as well as sending the vibrations through the horn: Is that not correct?

A. That is not correct, except for exceptional circumstances where the horn is badly constructed. A horn, to be a true transmitter of the sound produced in the diaphragm to the air outside does not have any natural frequency of its own within the audible range of reproduction.

Q. Don't you know that it was a fact in the phonographic art that they were very inferior sometimes in results because the horn set up its own vibrations, which mixed with the vibrations of the music passing through it, and adulterated the music so as to give an inefficient reproduction?

A. No, that is not true, for this reason: Many horns were constructed at that time which were made very heavy; they were made out of wood an inch thick; we ourselves made horns of very heavy wood, an inch and a quarter or two inches thick; in those horns the sound was simply propelled through that horn as a conduit. It formed a cone of air. The apex of that cone of air rested upon the diaphragm. The horn acted as a conduit for that cone of air. The diaphragm simply vibrated that air up and down. [295]

Q. Would the horn act in any other capacity than as a pure conduit?

(Testimony of Edwin S. Pridham.)

A. If the horn were illy constructed, of thin material, and you had this column of vibrated air inside, the walls of the horn might act as a diaphragm and mess up the sound, as we say.

Q. Take the ordinary tin horn in the phonograph as used for years, and as used now, wouldn't they set up vibrations of their own?

A. Undoubtedly. They were very bad horns, those early tin horns.

Q. Didn't all the tin horns used at that time have that same effect?

A. No, I don't believe so.

Q. Didn't the Edison tin horns have that effect?

A. I would say this, as I have said before, that if the horn is badly constructed, of thin tin, so that the pressure inside the horn can distort the walls of the horn, that is true. -

Q. I am taking a horn as properly constructed, and as Mr. Edison used to construct them, and as the Victor Company used to construct them.

A. They were very well constructed horns, the Edison horns and the Victor horns.

Q. Was not the defect I have suggested to you present in those horns?

A. I don't believe so, not in the horn.

Q. Did you ever listen to one of those devices when you could detect some other sound than the music, itself, to wit, the vibration caused by the tin of the horn?

A. Those horns were not always made of tin.

(Testimony of Edwin S. Pridham.)

Q. I know that. You can make them of anything you please. I am speaking now of the tin horns such as were made by Edison, and the Victor.

A. I don't recall tin horns made by the Victor. I recall the heavy wooden bell—yes, I do recall it, I beg your pardon, Mr. Miller. [296]

Q. There were many millions of them made and sold by the Victor Machine Company?

A. Yes, I recall now what you mean. You are speaking about the old type Victor horn that was exposed.

Q. They were known as the flower horns, weren't they?

A. The flower horn was an independent horn. The Victor Company did not use the flower horn. I will admit that they were horns that were made of tin and wood, and every other substance, yes.

Q. They sold probably fifty or one hundred million of them during their day.

A. That might be so.

Q. Will you please turn to page 70 of Dayton C. Miller's book and see if you don't find this definition of a diaphragm. You can follow me as I read it: "A diaphragm is a thin sheet or plate of elastic material, usually circular in shape, and supported more or less firmly at the circumference; the telephone is a diaphragm of sheet iron." You find that there do you?

A. Yes.

Q. You would not dispute that, at all, would you?

(Testimony of Edwin S. Pridham.)

A. Not at all; that is perfectly correct.

I spoke of going to New York for the purpose of exploiting our inventions. I made two trips there. The first one was in 1912, in the Summer. We made a trip to the Telephone Company with the instrument shown in the first patent in this bundle and spent a couple of months there. We were in the laboratory a couple of months, Mr. Jensen and myself, and we explained the device fully to them and came back to California. They did not adopt it. The advice of the telephone engineers back there was that we come back to the laboratory and try to develop this instrument further. They considered that the instrument was not a commercial instrument. This instrument that we had at that time weighed about 80 pounds and we listened [297] to it through ear tubes. It delivered very fine articulate speech. Through this instrument we talked over their circuits and demonstrated it for their engineers with great success. This instrument was not a commercial instrument, in their opinion. That was illustrated by the first patent that we took out. It is No. 1,051,113. It was simply a rectangular coil disposed in a magnetic field. It had a soundbox to which ear tubes were attached. We improved that further, as I just explained to you, in the patents that we took out; the succeeding patents.

Regarding the Lumiere device, Exhibit 11, I would say that that, if correctly made with all the elements as they are there, would be a very efficient

(Testimony of Edwin S. Pridham.)

device. This one is not correctly made. It has a very inefficient magnetic field. If you will notice how the magnetic field there is made you will see there are three poles with very small coils of wire on them. Under any circumstances that magnetic field will be very weak. It will not be an intense magnetic field in the air gap; so that I would say that as far as the diaphragm is concerned, and the movable coil with its housing, if that coil be immersed in a proper magnetic field it would be very efficient. I have played that identical instrument there, and was very much surprised to hear it play as well as it did, with the crude construction. Of that particular type there were not many sold. I might say the Victor Talking Machine Company sold a magnetic loudspeaker with that type of diaphragm. I believe that they sold 40,000 or 50,000 of them. This machine was bought in Los Angeles from a concern named the Penco Company. I think our Los Angeles distributor bought it and sent it up to the laboratory. It was advertised in the journals and in the technical papers at [298] that time. That was in 1928. It is not on sale now. I imagine it was discontinued very shortly after it was brought out, because it was so very inefficient from a magnetic-field standpoint, that the other loudspeakers that were on the market at that time, like the Magnavox, superseded it. It is an electrodynamic machine.

Q. I refer you to Defs'. Ex. D. United States patent to Siemens, and ask you if you do not find

(Testimony of Edwin S. Pridham.)

this language therein, in the second paragraph, on page 1: "When a permanent magnet, or an electro-magnet, is so constructed that it has its two polar surfaces of considerable superficial area presented to one another with a very narrow intervening space, the magnet exercises little magnetic influence on surrounding objects, being almost in the condition of a closed magnet. On introducing, however, a portion of an electric circuit into the narrow space between the polar surfaces of the magnet, and moving it to and fro, electrical currents are set up in the circuit, or, conversely, when electrical currents are sent through the circuit it is caused to move." You notice the expression there, "a very narrow intervening space," do you?

A. I do. This is a very interesting patent.

Q. He recognized the necessity for a very narrow air gap, did he?

A. Yes, he did.

Q. And he did show an air gap in his drawings, did he not?

A. Yes.

Q. Did he specify in his specifications how narrow that gap was?

A. He says a very narrow air gap is to be desired. I don't know whether he specifies the way it is to be made in his specifications.

Q. I have looked all through his specifications; he does [299] not anywhere specify how wide that gap is to be; he does say it is desirable to use a narrow air gap.

(Testimony of Edwin S. Pridham.)

A. That is correct.

Q. In fact, he has a claim for the air gap, claim No. 1, reading as follows: "A permanent magnet, having one of its poles extended and surrounding the other pole, an intervening space being left between the poles, substantially as set forth." That seems to be a claim for the air gap without regard to how wide or how narrow it is?

A. That is correct.

Q. There is another patent here on the subject of narrow air gaps which I would like to show you. That is Defs'. Exhibit P, the patent to Pollak. In this patent, beginning at line 22 on page 1, it is said: "The air space for the two coils is preferably provided by the use of a magnet shell which is separable from the core of the magnet, and by having at both ends of the magnet core a narrow space for the coils." And then further down he says, four lines from the bottom, on that same page of the patent, as follows: "A narrow annular intermediate space being left on each end between the core 7 and the edge of the side opening." And then in Claim 1 he gives one of the elements, among others, as a narrow air space, a coil in each of said air spaces, etc. Then in Claim 2 he also uses the same expression, narrow air spaces between the core and the end plate. You notice that he does not say anywhere in the specification how wide or how narrow that gap is, but simply refers to it as a

(Testimony of Edwin S. Pridham.)

narrow space. You note that in these patents, do you not?

A. That is correct.

Q. He evidently appreciated the necessity of a narrow gap, did he not, by using the word "narrow"?

A. I am not so sure about that in Pollak's patent, for this reason: Although he states narrow air gaps throughout his specifications, he uses two [300] air gaps in series or in multiple. His second claim calls for these narrow air spaces. We know that if you use these two air gaps around the central coil of a magnet it will not be as efficient as if there were one narrow air gap. However, I will say this, that undoubtedly Mr. Pollak appreciated the use of a narrow air gap. He was an engineer for the French Telephone Company, and undoubtedly was very well versed in the art. However, he does not show the equivalent of a narrow air gap in his patent.

Q. According to these drawings, how narrow is the air gap?

A. That air gap must be at least one-eighth of an inch wide. In this very small drawing I should judge by my eye that that air gap is one-eighth of an inch wide; that is .125 of an inch.

Q. When you said he had two air gaps, you meant he had one at the top and one at the bottom?

A. Yes, with one magnetic coil. I would like to

(Testimony of Edwin S. Pridham.)

suggest to you, Mr. Miller, that there is no contention about narrow air gaps per se.

Q. I show you another patent to Pollak, being the French patent 393,241, issued in 1908, in which he does not show the double air gaps but only one set of air gaps at the top.

A. That is correct.

Q. So that what you said in reference to the patent that had the double air gaps, one at the top and one at the bottom as being disadvantageous, or something of that kind, does not apply to this Pollak patent, because it has only the air gaps at the top.

A. That is correct.

Mr. MILLER: I would like to offer this patent in evidence as illustrative of the testimony of the witness, together with the translation.

The WITNESS: I would like to call attention in regard to [301] this French patent— In this French patent to Pollak it will be noted that the air gap at the top of the magnet is considerably wider than in the United States Patent; how much wider it is impossible for me to say.

(The document was here marked “Defs’ Ex. II.”)

Q. In your patents you have a narrow air gap in both of them?

A. Yes, we are supposed to have a narrow air gap in both of them.

(Testimony of Edwin S. Pridham.)

Q. Does your drawing show how narrow or how wide the gap is?

A. I would say it indicates a narrow air gap, especially that——

Q. Does your specification describe how wide or how narrow that air gap shall be?

A. It does not. It does not give the dimensions, as to how wide it should be.

Q. You thought that was quite an important matter, did you not?

A. Yes.

Q. Why didn't you describe the narrow air gap in it?

A. We were not interested in obtaining a narrow air gap. Narrow air gaps are well known in the art.

Q. Narrow air gaps were very old, weren't they?

A. Yes, indeed.

Q. You referred to the air gap in Sir Oliver Lodge's British patent as being too wide for practical purposes. Would an electrician, in looking at that drawing, recognize at a glance that the air gap was too wide?

A. I should think he would, yes, immediately.

Q. You did, did you not?

A. I did.

Q. As soon as you looked at it you saw it was too wide?

A. Yes.

(Testimony of Edwin S. Pridham.)

Q. Another electrical expert looking at it who saw immediately it was too wide, and he was versed in electricity, [302] etc., he would know how to make it narrower, would he not?

A. In that device you must remember that Sir Oliver Lodge was trying to make a coil vibrate in that air gap. The coil was in no way fastened to the top plate. It could move all around. For that reason, I think Sir Oliver Lodge was constrained to use a wide air gap very much to the loss of efficiency in his instrument. I think most probably that is why Sir Oliver Lodge used it. Undoubtedly Sir Oliver Lodge knew—he was a very eminent engineer, and he knew it was always advisable in a magnetic structure of this kind to get a magnetic field to use a narrow air gap.

Q. I will ask to have my question read, because you have not answered yet. I will put it this way. An electrician skilled in the art, looking at Sir Oliver Lodge's drawing for the first time, would not only recognize that the gap was too wide but he would know how, electrically, to make it narrower, or as narrow as he wanted it, would he not?

A. Answering your question directly as far as the magnetic field is concerned, the air gap in the magnetic field, he would know how to make that air gap narrower.

Q. He would simply bring the pole pieces closer together, would he not?

A. It is a very simple matter.

Q. No particular difficulty in that, is there?

(Testimony of Edwin S. Pridham.)

A. Not at all. Plf's Ex. 20 is a device that was manufactured in 1928 by the Magnavox Company and sold to the trade by the thousands. This specimen was sent to Mr. Loftus by the Magnavox Company. I tested out thousands of instruments of exactly similar construction.

Q. For some purpose or other you referred to your patent 1,329,928, dated February 3, 1920, and called attention to Fig. 10; what was the point you made there?

A. The purpose of calling attention to Fig. 10 was to show an example of bringing out the operating wire from the movable coil where the operating wire was not cemented to the diaphragm. The instrument as [303] illustrated in Fig. 10 was practically identical in every respect with the instrument illustrated in our patent disclosed in 1,266,988, in which the lead-out strips are claimed. I simply wanted to put this in as an example of how the lead-out strips were often attached to the coil.

Q. What is the form of that connection shown in Fig. 10 between the voice coil and the operating circuit?

A. That was evidently tinsel wire, telephone cord wire, of which we use many thousands of feet for this purpose. It consists of a small round tinsel wire. This tinsel wire is made up of maybe 60 or 70 fine strands of a very fine copper interspersed with thread.

Q. I believe there is no description of that in the specifications.

(Testimony of Edwin S. Pridham.)

A. No, there is not.

Q. Nor is it designated by any particular figure or letter in the drawings?

A. No, we did not claim it in this patent, at all, it was simply for the purpose of illustration.

Mr. MILLER: I desire to put this patent in evidence in connection with his testimony, because it was not put in evidence when he showed it to the court.

(The document was marked "Def's. Ex. JJ.")

Q. In the Atwater Kent and Stromberg-Carlson devices, what is the form of the conductor leading from the voice coil to the operating circuit?

A. In the Atwater Kent loudspeaker it is a form of tinsel wire, a flexible wire. This wire or conductor is formed of a large number of intertwined fine copper wires. I believe that practically the same thing is used in the Stromberg-Carlson.

Q. Is that what you referred to as tinsel wire?

A. That is correct.

Q. And the use of that was very old in the telephone art, [304] was it?

A. Yes, very old. Wherever you have a cord that has to move a great deal, like the cord to your telephone receiver, that cord is generally made of tinsel wire, in order that it will not break.

Mr. MILLER: That is all.

(Testimony of Edwin S. Pridham.)

Redirect Examination:

Mr. LOFTUS: Q. You were asked about narrow air gaps, and whether or not there was any problem in forming such narrow air gaps. Will you state whether or not there was any problem in connection with the actual use and maintenance of that narrow air gap, and, if so, what?

A. To all electrical engineers, the formation of a narrow air gap was always very desirable because we know the magnetic intensity increases in a magnetic circuit when the air gap is cut down. That is very old in the art, and it is very essential to have a narrow air gap. However, if you do have a narrow air gap you are immediately confronted with a serious problem, because there is a very intense magnetic attraction between the poles of the air gap, especially in an electrodynamic receiver where you have from 10,000 to 20,000 lines per square centimeter, and this attraction is very, very great. The slightest tendency of the poles to get off center will immediately shift that pole over and it will contact with the air gap to close the circuit. In general, the more narrow the air gap the more dangerous the situation becomes as to keeping that air gap in its true form.

Q. With regard to arranging the movable coil in that gap, does that present any problem?

A. That presents a very difficult problem indeed. It is not only necessary to space the two poles apart to form a very narrow concentric air gap, but it is

(Testimony of Edwin S. Pridham.)

very necessary to so arrange that coil in the air gap [305] that it may vibrate up and down, an axial motion, the vibration of a quarter to half an inch, whereas the distance between the pole faces and the coil may be only .002 or .003 of an inch. That is a very serious problem, and it is a problem that Magnavox conquered by mounting the diaphragm with its coil on one of the space poles, the other being of course spaced from the first one, and the diaphragm with its attendant coil mounted on the first pole; consequently, the coil was rigidly positioned in respect to this concentric air gap.

Q. And in your opinion are those problems which readily could be solved by the ordinary electrician or mechanic?

A. They are by no means easy problems to solve. It took us, you might say, from 1911 to 1920 to solve those problems, with a very urgent desire to solve them and a very urgent need to solve them.

Mr. LOFTUS: That is all.

Recross Examination:

As to how the voice coil is maintained in the center of the air gap in our Patent 1,448,279, after it is once fixed in relation to the top plate and the top plate is correctly positioned with relation to the center pole, then the coil will automatically be in proper relation to the air gap.

Q. But in case it got out of relation, how would you get it back? What do you have to maintain it in that position?

(Testimony of Edwin S. Pridham.)

A. It is maintained in position—I will not say it is maintained in position, it is originally placed in position by means of the screws shown in the sound-box. The screws go up through the top of the plate; they are fixed to the top plate through a free hole, so that the sound-box can be shifted around to locate the coil in the annular air gap with great precision. [306]

Q. Now, look at Fig. 4 of that patent, where you have an annular space or air gap with the coil in it, don't you know from looking at it that that seems to be quite a wide gap; in other words, there is a great clearance between the coil and the side of the pole piece?

A. I would not say it is a narrow air gap; it is not a wide air gap.

It would be very easy to maintain the coil in position by mounting the sound-box upon the top plate of this service. You will notice that the sound-box is mounted upon an extension of the pole 5; that is a ring there. In the actual making of this instrument, which is a permanent magnet instrument, you are looking at the end view of a permanent magnet instrument where, by all means, the air gap should be narrow. You do it by mounting the sound-box upon the top plate or outer pole and simply adjusting the sound-box on the top plate.

Q. How is the coil maintained in its central position in the gap in the Atwater Kent machine?

A. The coil is maintained in the gap in the At-

(Testimony of Edwin S. Pridham.)

water Kent machine by a resilient spider at the apex of the cone. After the air gap is fixed by the spacing ring on the plate of the Atwater Kent, the coil is disposed in that air gap loosely; then I think some gage must be put in there from the under side and the central spider is then tightened up. The spider is sometimes called a labyrinth spring. The coil is attached to it in order to keep it firm and steady in the center of the air gap. It is the same in the Stromberg Carlson, except the shape of the spider is a little different.

Mr. MILLER: I omitted a drawing of the Johnson patent which is shown in the little blue book of ours, and which was made by our witness. I have the drawing here now and some photostatic copies of it. While it is a little out of order, I would like to put it in evidence at this time if I may. I really forgot it before.

Mr. LOFTUS: There is this objection, that no such drawing [307] appears in the Johnson patent.

The COURT: I understand that.

Mr. MILLER: Yes, he took it from two figures.

(The document was here marked Def's. Ex.

KK.) [308]

Redirect Examination

By Mr. LOFTUS: In this connection the demonstration that I want to offer here has to do with an inquiry made by the Court during the examination of the defendants' witness, Mr. Fouts, where

(Testimony of Edwin S. Pridham.)

the Court asked: "Suppose that sound box chamber in the Pridham and Jensen patent was enlarged to correspond to what is now called the cone-shaped loudspeaker, would it produce sound without a horn? A. I would not say it would not produce any sound at all; I think you would hear, probably a little mouse-like squeak from it. That is about all you would hear. It would not be of any satisfaction as a reproducer of sound without the horn." Now, Mr. Pridham, you heard that testimony?

A. Yes, I did.

Q. What have you to state in that connection, and are you prepared to make any demonstration? I also refer to another inquiry by the Court of Mr. Fouts wherein it was stated by way of question, "Enlarge every element in it, if you please; enlarge every element in it until it becomes a device as large as any one of the cone-shaped loudspeakers here in evidence, leaving off the horn, then would the device produce sound? It would produce sound. I think it would produce sound, yes. It would be a distorted sound." Now repeating the same question, are you prepared to demonstrate that and what have you to say in connection with these opinions of Mr. Fouts?

A. In my experience in making dynamic speakers from 1916 on to the present date, we have used all manner and types of diaphragms, small diaphragms and large diaphragms; sometimes the

(Testimony of Edwin S. Pridham.)

diaphragm and sound box would be used with a horn and sometimes they would not be used with a horn. We have sold many hundreds of instruments called telephonographs——

Q. Telemegaphone?

A. The reproducing part of the telephonograph was called the telemegaphone; the telemegaphone [309] was simply a dynamic speaker like we have up here with a small diaphragm. That was set in a cabinet and with a microphone reproducer which played phonograph records and would amplify during its reproducing. The cabinet was a large structure and you could use a horn in it or not, as you saw fit. I have in the past week reviewed a great many of my early structures, and I would like to demonstrate to the Court how these various diaphragms work. It will take me about two or three minutes to do this, but I think it will do a great deal to throw light upon this particular diaphragm.

Q. Will you please do that, and explain before you make the demonstration what sort of apparatus you have here so that it will appear in the record?

A. Yes, I will. I have a two-stage amplifier which my twelve-year-old boy made up for his radio set. It takes simply the input of a phonograph and leads it to the amplifier in the first stage and leads it to the second stage where it is amplified again and passes through this output connection to this telemegaphone. This telemegaphone, which is identical with the R-3, except for this fact,

(Testimony of Edwin S. Pridham.)

that this particular one was used in reproducing phonograph music, whereas the R-3 had a special induction coil which fitted it to receive radio impulses. I will put one on and I will play a record. This was sold just as is, like that, and it was also sold in a cabinet called a telephonograph. This cabinet had a square surface of maybe two square feet. Now I would like to play this for you. You will notice the difference between the loudspeaker without the baffle and with the baffle. I will play one more record.

Q. Remove the top of that sound box, Mr. Pridham.

A. Yes.

Q. For the record, you have been able to produce so-called self-sustaining sound waves on this demonstration without a horn, first?

A. Absolutely, the music would compare very favorably [310] with anything produced in the radio field from 1922 on to 1926.

Q. Do you find any mouse-like squeaks in it?

A. No, I do not. I have found in the demonstration of radios, it is a matter of degree of quality, and it would be very acceptable in a great many places. In fact we sold instruments that did not produce anywhere near as good a quality as that, we sold two or three hundred thousand of them.

Q. When you placed that board there, how did that compare with the effect of a horn?

(Testimony of Edwin S. Pridham.)

A. The board placed upon there is similar to placing the instrument in a cabinet. All loudspeakers today are either placed on a board or in a cabinet. If you take them out of the cabinet to play, they lose the fundamental characteristics; the lower notes which emanate from the sound box in the front are neutralized by the pressure of the back part of the diaphragm; in order to stop the neutralization we either put these in the cabinet to shut off the front board of the sound box from the rear, or you can use a flat board. In practically all radio cabinets designed today they simply put the loudspeaker in a cabinet and that serves very well as a baffle. Now "baffle" is simply a term that was coined, you might say; it has been used for many, many things. In fact, in one of the very early patents of Dann and Lapp a baffle was shown. The theoretical effects of a baffle were investigated by Lord Rayley about 1895, and it is a well known physical thing.

Q. You understood the equivalency of the horn and baffle at the time that you applied for your patent?

A. I did, it was well known in the physical art and you could either use a horn or baffle.

The COURT: You say the word "baffle" has been coined. You find the word "baffle" in the dictionary.

A. Oh, yes. In [311] explaining my meaning as to the word "coined," I meant it was coined for

(Testimony of Edwin S. Pridham.)

this particular art. Baffle is something that stops or opposes, in the dictionary, and of course this board, being a stopper or an opposer of the sound waves, they naturally termed it a baffle. I do not mean it was coined like the word "kodak" or anything like that, but it was fit for this particular problem.

Mr. LOFTUS: You have constructed an enlarged diaphragm and sound box, have you?

A. Yes.

Q. Are you prepared to demonstrate that?

A. I would like to demonstrate that and show the effect of simply multiplying the size of this diaphragm and sound box.

Q. Explain as you go along, the construction of that, and in what manner it compares with the disclosure of the patent in suit.

A. When the discussion came up about the size of diaphragms, I immediately got in touch with our laboratory in Chicago and they made up this flat diaphragm very similar to the metal diaphragm that we use. It is enlarged three to one. It is not an absolutely micrometric enlargement, but approximately three to one. This diaphragm and sound box is made identically the same, with the tripod or the support for the coil. Here is the diaphragm. Now with this sound box on here, which is very crudely made—we did not wish to go into the cost of making dies to make a metal sound box, so this is a good heavy ply wood. It

(Testimony of Edwin S. Pridham.)

will not vibrate of itself and could not possibly give off any sound. When that is put on there in this manner we have a magnified Magnavox sound box of the 1922 pattern. Now I would like to demonstrate the sound box which is exactly the same except for the enlargement. I will play with the top of the sound box on and with the top of the sound box off, and let you hear how it sounds. You can feel the diaphragm vibrate all over the surface. [312]

Now I would like to play one more record to show how the diaphragm in the enlarged form reproduces every portion of the musical scale from the lowest bass to the highest treble. That bass note there is the tuba. You will notice that it makes the diaphragm move over its whole surface as a unit. Now putting on the top of the sound box you will notice it has the effect of a small baffle.

Q. How does that reproduction compare with the cone type diaphragm which Mr. Fouts referred to as a free-moving cone?

A. I would say that with the same degree of care used in a flat diaphragm as is used in making a cone diaphragm for a commercial product, you would get exactly the same acoustical result. The problem is simply to get a light structure which vibrates the air in such a fashion that the whole surface of the diaphragm will vibrate practically as a unit, for this reason, if the center of the diaphragm vibrates a little faster than the outside

(Testimony of Edwin S. Pridham.)

edges of the diaphragm, the phase relations between the sound are out of harmony, the inside pushes the air a little faster than the outside, and you get the effect of a very small baffle; the tones are practically neutralized. So consequently in building a diaphragm of that flat type it is necessary to get strength on that flat diaphragm. Now in contradistinction to the cone diaphragm the flat diaphragm must necessarily be built up a little stronger in the center, and as it comes out toward the edge it can become lighter.

Q. As in the case of Lumiere?

A. That in the case of Lumiere, or Stroh or Brown or any of those men who made these diaphragms, they made the diaphragm rigid at the center and progressively thinner at the edge, especially in S. G. Brown, who happened to be a very distinguished English scientist, his diaphragm [313] calls for a very thin aluminum diaphragm which is progressively thinner toward the edge until it gets to about .002 of an inch thick at the edge. The Magnavox Company itself built conical diaphragms as early as 1917, wherein they used a flat diaphragm that was .011 of an inch thick at the center and .002 of an inch thick at the edge. These diaphragms also produced very good music. Now I am willing from my acoustical experience to say that a flat diaphragm ten inches in diameter could be made and will be a commercial success on the market today.

(Testimony of Edwin S. Pridham.)

Q. With or without a horn?

A. With or without a horn. Now I have also used these large diaphragms with a large horn; in fact we built a large horn which had an area of opening of about 144 square feet; it was a very large horn. It was so large that people could dance inside of the mouth of it. It was built for Idora Park.

Q. You sold this type of instrument that you have just demonstrated in a cabinet so that you had this baffle board effect?

A. Absolutely, we sold many hundreds of them.

Mr. LOFTUS: We offer in evidence in connection with the witness' demonstration, certain parts of the apparatus that can be referred to, and I will have a drawing of that to make it understandable in the record. The first offer will be of the magnetic structure, which, by the way, is similar to Defendant's Exhibit A.

(The magnetic structure is marked Plaintiff's Exhibit 23.)

I will next offer the enlarged corrugated diaphragm.

(The corrugated diaphragm is marked Plaintiff's Exhibit 24.)

I will next offer the enlarged top portion of the sound box.

(The enlarged top portion of the sound box was marked Plaintiff's Exhibit 25.)

(Testimony of Edwin S. Pridham.)

Q. Now there has been some mention here of an article by [314] Rice & Kellogg, offered in evidence by defendant as defendants' Exhibit CC. Do you know who Rice and Kellogg are?

A. I know them very well. I have been at the General Electric Laboratories and have seen their work and read their articles. They are acoustical engineers for the General Electric Company.

Q. Prior to the appearance of this article had you sold them loudspeakers of the Magnavox type?

A. We sold a very large number of Magnavox speakers to the General Electric for use in commercial work and also for use in their laboratory.

Q. Do you know of any controversy that is going on between the General Electric Company and competitors in regard to the superiority of a cone as distinguished from a horn?

A. I am very well acquainted with that controversy, and it is purely a controversy regarding the efficiency of a cone or a horn. The General Electric engineers have always contended that a cone was superior to a horn. The Western Electric engineers have always said that a horn type loudspeaker was superior. As a matter of fact this controversy has been going on for some time and the general opinion among acoustical engineers today, practically throughout the world is that a horn type of loudspeaker when properly constructed is by far the most efficient type of speaker there is in the world.

(Testimony of Edwin S. Pridham.)

Q. The Magnavox Company has remained neutral on that discussion, I assume?

A. Yes, we have remained neutral.

Mr. LOFTUS: That is all.

Recross-Examination by Mr. Miller:

This particular type of apparatus here is what is known as the 2-stage audio frequency amplifier. It receives weak impulses from any source, such as a phonographic pick-up as is used here. That weak impulse is impressed upon the grid of the first tube. [315] It is amplified through an amplifier circuit and results in a greatly enlarged output of the corresponding input. These happen to be Radio Corporation tubes. They are similar in principle to the DeForrest tube. This device marked "S.M. 220" is a transformer. It is the input transformer. It takes the electrical current from the electrical pick-up, passes it through the primary of this transformer, and the secondary of this transformer feeds the grid of the first tube. The transformer marked "S.M. 256" is the intermediate transformer and it is placed between the output of the first tube and the input of the second tube. It simply takes the amplified output of the first tube, passes it through the primary of this transformer, and the secondary of this transformer feeds the grid of the second tube. The switch that you see next to the transformer 256 is the A battery switch. This simply disconnects the storage battery current from the

(Testimony of Edwin S. Pridham.)

tube. The storage battery current feeds the filament of the tube and it also feeds the field of the loudspeaker. This device marked "Ever Ready" is a C battery. With an amplifier such as you see here, it is necessary to impress upon the grid of the tube a negative C bias. In this particular case when we are using 180 volts on the plate of the tubes it is necessary to bias the grid with 40 volts of minus C battery. The battery that is in the rear of this one is in series with the first one to give the 40 volts. The first battery gives $22\frac{1}{2}$ volts and the second battery gives $18\frac{1}{2}$. This little double-throw switch is a switch to throw from the first stage to the second stage. It is marked "1" and on this side two. The last transformer on the board is what is known as the output transformer of the audio-frequency amplifier. It takes the output from the plates of the tubes and by transformation reduces them to suitable current [316] for reproducing. There is a storage battery to feed the filament of the tubes and the field of the speaker. It is just an ordinary storage battery; 6-volt storage battery.

Following a discussion between court and counsel, Mr. Pridham was asked by Mr. Loftus to identify a certain drawing, as follows:

Q. State whether or not that is a correct drawing of the apparatus that you have demonstrated in respect to the electrical connections.

A. This is a correct drawing of the two-stage amplifier as used with this exception, there is a

(Testimony of Edwin S. Pridham.)

small switch here which we did not use at all. It throws it from the first stage to the second stage. That is not shown on the drawing because it was not used at all. This happens to be a two-stage amplifier which was made by my small son for his radio set, and he used many contrivances on it, but I simply used it to amplify the pick-up from the phonograph.

Q. Was that drawing made under your supervision?

A. It was, and I checked it afterwards.

Mr. LOFTUS: I offer in evidence the drawing identified by the witness.

The COURT: Admitted.

(Drawing of electrical connections used in demonstration marked Plaintiff's Exhibit 26).

In answer to your question, the apparatus which is shown in the model and illustrated in the drawing Ex. 26 is not necessary to correct reproduction of the sounds. This particular apparatus is used for amplifying phonograph records. Any output of sufficient power such as a radio output or telephonograph output would operate these fixtures. It is necessary for this [317] particular demonstration to use a 2-stage amplifier. None of this intermediate mechanism is shown in the Pridham and Jensen patent. The dimensions of this enlarged pot are practically for the bottom part 10 inches in diameter and the top is about $4\frac{1}{2}$ inches in diameter. It is roughly a 3-to-1 enlargement of the small sound-

(Testimony of Edwin S. Pridham.)

box. We did not put on the market any devices like Ex. 24. Exhibit 23 is a correct representation of the Magnavox loudspeaker. I used this big baffle board during my demonstration. It is 2 feet by 2 feet. The object of using this was to show the effect of restricting the front waves from interfering with the rear waves which are propagated by the diaphragm and made the machine work better than it did. There is no such baffle board shown in our patent.

(Thereupon defendants offered in evidence a board 2 feet x 2 feet with a hole in the center, as Defs'. Ex. LL. Also a similar board with a larger hole in the center, as Defs'. Ex. MM, both of which boards had been used by the witness during the demonstration.) Referring to Exhibit 25, the bottom part is about 10 or 10½ inches, maybe 11 inches, in diameter, and the ferrule part is approximately 4 to 4½ inches in diameter. The whole thing is supposed to be an enlargement of about 3 or 3½ to 1. The diaphragm of Exhibit 24 is a paper diaphragm, just pressed paper. There is no paper diaphragm shown in our patent. As for comparative dimensions of this Exhibit 24 as compared with the diaphragm shown in our patent, there is no dimension shown in the patent. We made them of all diameters. Exhibit 24 as compared with Exhibit 23 in so far as the diaphragm is concerned, is about three times larger. [318]

ERNEST INGOLD,

called as a witness by plaintiff.

Direct Examination by Mr. Loftus:

I live in Burlingame. I was formerly a distributor for Atwater Kent. I am a defendant in this case. I can not identify any of these instruments such as Plff's Ex. 4. I was subpoenaed at ten minutes after ten this morning and I have not seen my attorneys, I guess, for two months. I would like to talk with either Mr. Miller or Mr. Boyken. May I not have that privilege?

The COURT: Oh yes, you can talk to them. We will take a recess for five minutes.

(After recess): I paid Mr. Miller all of his bills to date with my funds.

Q. You were reimbursed by Atwater Kent?

A. No, not in cash.

Q. Answer the question?

A. I was given from time to time on my request, allowances by Atwater Kent at least partially to offset those checks.

Q. You say partially. Weren't you reimbursed entirely?

A. In the end it will figure out almost in its entirety.

Q. You had nothing to do with the conduct of the defense, did you?

A. Mr. Miller takes care of that.

Q. And Mr. Miller was selected by people in the East, that is the Atwater Kent Company?

(Testimony of Ernest Ingold.)

A. Mr. Miller was selected by me.

Q. What voice have you had in the conduct of this defense?

A. Well, Mr. Miller takes care of that; he is my attorney. I have no special voice in it. I severed my connection with Atwater Kent Company December 31st of last year, and I am no longer a distributor for Atwater Kent goods. [319]

HERBERT E. METCALF,

called as a witness for plaintiff.

Direct Examination by Mr. Loftus:

I am 39 years old and live at Walnut Creek, California. I became interested in radio in 1908; in 1912 being a member of Tufts College Wireless Society at Medford Hillside, Massachusetts; I went through and took a first grade commercial radio operator's license at Boston Navy Yard in June, 1912. From then on I have been actively interested and engaged in radio work. At Tufts College in 1913 and '14 we tested practically all types of telephone receivers which were then being made in this country. After graduating from Tufts College in 1914 I did post graduate work at the University of Illinois, at the University of Minnesota, and in 1917 was instructor at the North Dakota Agricultural College. I enlisted in the United

(Testimony of Herbert E. Metcalf.)

States Army in February 1918, was immediately sent to Columbia University and was commissioned in June and stationed as instructor in the Air Service School for radio officers at Columbia University. I had courses there in vacuum tubes under Professor Morecroft, and in alternating current under Professor Schlichter. I was sent from Columbia University to Bolling Field as radio officer in charge of radio development work for the United States air service, working directly under the director of air service. From there I was sent to California and had charge of the aeroplane radio for the United States Forest Patrol and for the Border Patrol in 1919. I resigned from the Army after having received a commission as second lieutenant in the regular army, to enter the employ of the Magnavox Company in October, 1920. I stayed with the Magnavox Company until 1928, and resigned as chief engineer to enter consulting work. After doing consulting work in a number of allied lines I spent the last two and a half years doing development work in sound recording and sound reproduction. I have just returned from seven [320] months in Hollywood, which I spent at the studios of Warner Brothers, Fox and M. G. M.

My work at Hollywood was in connection with sound recording and reproduction for talking pictures. I am familiar with the Pridham and Jensen patents here in suit and was with them very close

(Testimony of Herbert E. Metcalf.)

to the time these patents were applied for. These devices were known as "dynamic" speakers.

Q. What was the first dynamic speaker of any sort that ever came to your attention?

A. When I was at Bolling Field, any equipment which had to do with radio that had been brought to the attention of the air service was brought to Bolling Field to my laboratory for test. Mr. Pridham, and I think Mr. Steers, who at that time was president of the Magnavox Company, brought out to the field a number of dynamic speakers and a two-stage amplifier. We set up these speakers on Bolling Field and made a number of tests where some of our men walked over the field to a distance of two and three miles listening to music and speech as it came from the speakers. On the basis of that demonstration I recommended that these speakers be used in the opening, I believe, of the Fifth Victory loan which took place— Let me refer to my note book here— April 21, I believe.

Q. What year?

A. April 21, 1919. In that demonstration a radio receiving set was installed on the steps of the Treasury Building and connected to a battery of speakers, at least with several Magnavox speakers, and after the set up had been made I was taken back to Bolling Field by a Government automobile, got in a plane which was equipped with a radio transmitting set, and flew over the Treasury Building at a height of approximately 2600 feet and read

(Testimony of Herbert E. Metcalf.)

into the microphone of the radio telephone the President's cable which had not been released to the press or the [321] public until that reading. That was caught on the Treasury steps by the receiving set and reproduced to the large assembled crowd as I was reading it. To the best of my knowledge the air service, or airplanes had not engaged in such communication before that time.

Q. Do you have any records or articles of descriptive nature bearing on these early tests?

A. During the time I was in the Army, due to the wish to keep track of things, and also to keep my releases in order, I kept a scrap book, and in that scrap book I pasted at that time clippings from newspapers which appeared in the press on the days following this demonstration.

Q. You have copies of those there have you?

A. I have both the original in the note book and photostats which were taken from it.

(Photostats of various newspaper and scientific articles produced by the witness were offered in evidence, to which defendant objected as immaterial, irrelevant and incompetent and as hearsay. Objection overruled and exception allowed. Thereupon the photostats of various newspapers and scientific articles referred to by the witness were marked in evidence as Plff's Ex. 27).

Mr. LOFTUS: Q. Now from your experience in connection with loud speakers of the dynamic

(Testimony of Herbert E. Metcalf.)

type, what would you say are the essentials for a successful commercial loudspeaker?

A. Of course the first essential is that it shall be efficient. It should have mechanical efficiency, acoustical efficiency, and also electrical efficiency. If those are not combined the result will not be satisfactory as far as the sale is concerned to a consumer. It is quite possible to do away with efficiency, for instance, such as electrical efficiency in the laboratory where a large [322] amount of power is easily available, but for a commercial instrument which is acceptable to the public, efficiency right straight through is greatly to be desired.

Q. And that consists of electrical, magnetic and acoustical efficiency?

A. Yes.

Q. And mechanical?

A. And mechanical efficiency.

Q. You are familiar with the prior art that has been referred to here?

A. Yes.

Q. Just turn to that chart that has been offered in evidence as Plff's Ex. 16 and state whether or not that correctly sets forth the underlying principles of the various prior art structures as compared with the patent in suit.

A. That seems to very properly show the prior art, and also to show the present type of loudspeaker which is involved in the present case.

(Testimony of Herbert E. Metcalf.)

Q. Referring to the Lodge illustrations there, wherein are they lacking in respect to successful commercial devices.

A. One of the necessary things for a commercial device to have is portability, something which can be shipped, and the Lodge device is an assembled procedure. The flat sounding board D is resting lightly on the support, which we are given to understand are chemical retort stands, and one very interesting thing which I think can be proven very quickly is that unless the diaphragm there, or the sound board, is screwed down it will creep, the jiggling would creep it off the support and the coil would rub in the air gap and it would in no way be commercial.

Q. That is referring to the first figure on the chart marked Plff's Ex. 16?

A. Yes, in the upper left-hand corner.

Q. And in respect to the next one of the Lodge syntonic receivers, what have you to say in that regard?

A. A syntonic receiver might be compared, perhaps, to an automobile horn where [323] it makes a noise of constant frequency. Now the mere fact that a device such as Lodge states in his first type of device, that when it was loaded with a moving coil it became useless for a syntonic receiver, does not in any way mean that it became a wonderful loud speaker. The chances are a thousand to one, if it became useless as a syntonic receiver, it became ab-

(Testimony of Herbert E. Metcalf.)

solutely worthless as a reproducer of all frequencies. Now one of the surest ways to ruin the reproduction from any polytonic receiver, as you might call it, would be to load it, to dampen it, and if the addition of this coil made it so dampened that it would not act as a syntonic receiver, I can not see how in the world it would make it so that it would respond to all frequencies.

Q. Now in regard to the matter of supporting the diaphragm in the Lodge syntonic receiver, what have you to say?

A. There was no peripheral support and no diaphragm housing or sound box.

Q. Now directing your attention to the Johnson patent No. 1,075,786?

A. That Johnsen patent is a puzzle if you read it carefully, because in it he states that magnetic material is to be put on the moving coil. First and foremost, any magnetic material on a moving coil of that type would lock and stick that moving coil to the casing so hard that it could not move. In the second place, there is no peripheral support for the diaphragm and I can not see how you would get anything other than a pumping back and forth of that diaphragm D, and I can not see how you would get any sound out of it at all.

Q. In regard to Pollak, U. S. 939,625?

A. Pollak shows a double-ended device with an air gap in each end. In the air gap are moving coils to which are attached what presumably might be taken as a diaphragm. It is impossible to tell

(Testimony of Herbert E. Metcalf.)

from the patent whether those diaphragms move in phase or whether they move out of [324] phase, and it appears that the coils are held in the gap by two strips which pass over the face of the top plate, and if that is so, the coils would not be able to move except in one direction; they would be held from going in toward the center of the device because of the strips; they could not go both ways from zero. There is nothing which indicates the sound box or anything of that sort.

Q. In other words, it would not be a loudspeaker at all, would it?

A. No. As I remember it, those things that look like diaphragms were portions of a telephone transmitter.

Q. Now in regard to the Oliver U. S. Patent 951,695?

A.. The whole secret of a loudspeaker is a device which can give a substantial motion to a diaphragm. Oliver shows a diaphragm and sound box, the diaphragm having the main moving coil placed away out near the periphery, and it would be impossible for a device of that sort to operate with any wide amplitude. In addition it has no means for spacing pole pieces, and if a device of that sort were shipped, the weight of the coil would undoubtedly fall on the central pole piece and drive it out of position. That was one of the things which often occurred.

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Q. Now directing your attention to the illustra-

(Testimony of Herbert E. Metcalf.)

tion of the Magnavox loudspeaker, will you state whether or not the various objections that you have just mentioned are taken care of there in any way?

A. Yes.

Q. If so, how?

A. In the first place, the Magnavox speaker has good electrical efficiency. The air gap is small. The watt pounds of wire involved will be low because of the magnetic efficiency. The moving coil is set in there with a minimum of clearance. Now a minimum of clearance simply means that the air gap can be brought right up to the edges of the coil, the [325] sides of the air gap can be brought up to the edges of the coil, and if there is not anything to keep that coil from wobbling sideways it is impossible to keep the coil in such close relationship, and consequently it is necessary to keep three things in concentric relation, not only to put them there but to keep them there; the central pole piece B, the hole in the top plate A, and the moving coil must be made solidly, kept by some means or other from moving sideways; if you do that, then the air gap can be made very narrow and motion up and down to the extent of one sixteenth to one quarter of an inch can be had without danger of rubbing, and H spaces that pole, that center pole piece, and keeps it in concentric relation, and the solid relationship of the spider which fastens the moving coil on the diaphragm, keeps the coil in the field at all times. It has all forms of efficiency, it has acoustical effi-

(Testimony of Herbert E. Metcalf.)

ciency, it has a diaphragm which is corrugated, which is free to move up and down. As I remember it, the Magnavox metal diaphragms, such as have been show in evidence here, were several thousandths thinner at their edges than they were in the center, to free up the motion. It was well known even when I first came to the Magnavox Company, that a diaphragm should be free to move. As a matter of fact when I was in the laboratory there I made a large number of diaphragms of various kinds and various sizes and helped to test them out. I remember particularly one device which was made, and I think it was probably made before I came there, at least I saw it around 1920, which had the whole thing enlarged, both the field, the diaphragm, the sound box and everything.

Q. Prior to the time that you became acquainted with this Magnavox structure what was there available in the way of loudspeakers?

A. I had a problem on my hands at Columbia University as instructor in the air service school there, of instructing a large number of [326] students in code reception. I built a receiving set which we were allowed to have at that time, tuned to German and French stations. We received those in the office. I tried through the director of air service and through the agencies that I could, to get hold of a loudspeaker. I finally succeeded in getting an annunciator, a horn type speaker which was made by the Western Electric Company; it was the best,

(Testimony of Herbert E. Metcalf.)

and as far as I could find out, the only thing available at that time. It was a magnetic type of speaker, and if we tried to crowd it, to put any amount of energy in it, to make it talk up loudly, it would rattle, the armature would hit the pole piece, and it was not satisfactory and we did not meet with any satisfactory loudspeaker until we found a Magnavox dynamic at Bolling Field in 1919.

Q. To what extent, if you know, are the magnetic type of speakers manufactured and sold today in comparison with the dynamic type?

A. There is no comparison at all; as far as I know, the magnetic type, except for distress stock which has remained in junk shops for years, I don't know of any magnetic speakers, at least, which are being actually sold today.

Q. In regard to the use of a horn as compared with the large conical diaphragm, what is the similarity or difference in actual performance, according to your experience?

A. From actual performance point of view, for the finest and most faithful sound reproduction, there is no doubt whatsoever in my mind that the horn type of speaker is probably the best. My reasons for saying that are simply, from an examination of the industry which has developed in Hollywood for the recording and reproduction of talking motion pictures, while it is true that the General Electric Company has supported the cone diaphragm type or baffle type of speaker the Western Electric

(Testimony of Herbert E. Metcalf.)

Company has supported the horn type speaker. Many of the present day dynamic speakers as made by the Western Electric [327] Company, are used with a horn having conical diaphragms in them. The conical diaphragm is old, and has been well exemplified by Mr. Brown in some of the early receivers. However, in the mixer booth in the recording studios at Warner Brothers and at Fox's, and at M.G.M., they have gone to the trouble of putting in a horn with a four-foot opening; the horn itself is nearly as big as the mixer booth and is put on top of it, with the opening facing down; it is the funniest looking thing you ever saw; it is nearly as big as the booth. I asked them why they did not use the small inconspicuous easily-installed cone diaphragm for the speaker in this mixer booth, and they said they were not as faithful as the type which they were using then. Now that was not because they could not get them. Warner Brothers, M.G.M. and Fox, all of those studios might, if they desired to, use an instrument which could be bought on the open market for use in the studio, for even though they are operating under a Western Electric license, they are entitled to buy other instruments if they desire to. Where they do not need the very finest quality and where space is at an absolute premium, they do use the cone diaphragm type, the cone diaphragm and the baffle. One of these uses is in the projection room of a theatre; where all that is desired is to check the conversation, to see whether

(Testimony of Herbert E. Metcalf.)

or not it is being projected through to the horn. On the stage they will use a battery of horns behind the screen on the stage of the theatre, and a little cone speaker in the projection room to check by.

Q. Referring to the conical diaphragm, is that complete without a baffle?

A. If the conical diaphragm itself is large enough to act as its own baffle, it is complete without a baffle. Now the Western Electric Company had on the market for a long time what they called their 36-inch cone, a great big thing. Now the conical sides [328] of that device acted two ways. It vibrated in the center and acted as a baffle on the outside. But the devices of four or five or six inches in diameter will not function faithfully without a baffle and are not so used. The cabinets in which they are installed are the equivalent and do exactly the same thing as baffles. As to these baffle boards shown here, it is not necessary to make them run straight out. What is desired is to have a path interrupter between the front side of the diaphragm and the back side of the diaphragm of a certain limit, and that limit in size is determined by the low notes which you desire to reproduce. Now some people like high pitched sounds and some like low pitched sounds; if you want to adjust that you do it by the size of the baffle used.

Q. Compare the operation of the baffle with the horn.

A. In the final analysis, what you have to do to

(Testimony of Herbert E. Metcalf.)

make sound waves is to take the electrical energy and transform it into mechanical energy which creates sound waves. Now in order to do that we have to cause motion some way or the other. Then we have to cause that motion to put the air in motion one way or another. Whether we choose to do it through a small diaphragm, which does not need to be of any particular shape, and then put a horn associated with that to gradually build up a grip on the air and free surface, or whether we put a baffle around there to prevent the waves from one side of the diaphragm going around to the back of the diaphragm and neutralizing themselves, does not make any difference. It is a question of the load. In order to get a propeller to operate efficiently in water you have got to have some kind of a load transmitted to that propeller. If we have a small propeller hitched onto a great big boat, we know in order to move that great big boat we ought to put on a big propeller, or we could put on the little propeller and move it very fast. [329]

Now as a typical example, the "Miss England", which is the fastest boat today, uses small propellers but runs them at 12,000 revolutions per minute; it does not make any difference—you can use a large diaphragm where it gets its grip directly on the air, or you can use a small diaphragm and bring out that air which is put in motion by the diaphragm to the opening of a horn to get its grip at the opening.

(Testimony of Herbert E. Metcalf.)

As a matter of fact, in these big theatres, such as the Fox Theatre up here, it would be impossible to set enough air in motion with the cone type of diaphragm alone; they could not do it; they would have to use twenty or thirty cones to set enough air in motion, but if they put one of these same cones, or as probably better designed by the Western Electric Company, a diaphragm and sound box, in back of a horn which has an opening, we will say six feet across, then with that big six-foot opening air could be set in motion, to fill the theatre with sound.

Q. Now in regard to a sound-box, what is your understanding of the meaning of that term in the art?

A. Dayton C. Miller calls it a diaphragm, and a diaphragm housing. Now it seems quite significant to me that the word "housing" was used by Dayton C. Miller away back in 1916. He called it a diaphragm housing; with these cones they call them cone housings. The diaphragm in its housing was what we knew in 1920, 1921, 1922, 1923, along in there, as a sound-box, and Dayton C. Miller, in his designs, showed them with the front wide open, with the back wide open, and we knew at the time that the sound-box could be made open, closed, or any old way. I simply took it for granted that in any sound box the diaphragm naturally was supported at its edges; I have not known of any sound box, which I would call a sound-box, where the

(Testimony of Herbert E. Metcalf.)

diaphragms were not supported at their edges, [330] and consequently I took it purely for granted and did not so state.

Q. The importance of that support at the edge of the periphery is what?

A. It is very important because of the phenomenon which is known as blasting, and which causes certain areas of the diaphragm to flutter (I call it flutter, I do not like to call it vibrate, because they do not go through any regular motion). I think a good example of blasting or fluttering is such as when you take a piece of paper by its edges and shake it. There are nodes gathered at points and these cause a tremendous fluttering, and that fluttering can be heard; if you leave any of the edges exposed, that particular part of the edge will do that.

Q. You have seen the chart which has been offered in evidence as Plff's Ex. 12, have you?

A. Yes.

Q. Did you have anything to do with the preparation of that?

A. I did.

Q. Is that scientifically correct?

A. I have seen devices which illustrate each one of these sketches which are shown here. There is nothing there which I have not seen in use. I might say as regards Lumiere, Patent No. 1,036,529 up in the upper left-hand corner, I have never happened to use one like that, with the little bell-shaped flare on it, but I have seen a device which has been en-

(Testimony of Herbert E. Metcalf.)

tered as an exhibit here of that type, and I also saw the old Victor speaker which was made with a diaphragm of that kind. Down in the lower left-hand corner, I have seen a number of installations of that kind where the cone diaphragm speaker was placed in the end of a horn, for the simple reason, as I said a few moments ago, the cone diaphragm alone with its baffle, for instance, will not be a sufficient load for the cone to get a large amount of energy into the air, so they load it some more by putting a horn on it. There are a number of advertising [331] trucks running around which have cones mounted in the end of the horn.

Q. Directing your attention to the first patent in suit, No. 1,266,988, what, if any, importance has the manner of arranging the lead-out wires as shown therein?

A. When this device was used as a loudspeaker, particularly when large amounts of power were put through it, the diaphragm moved over quite a wide range, and I have seen in the laboratory devices of this character in which the leads have been brought out in a number of different ways. I have seen the fine wire of the moving coil brought out directly. I have also seen the wires break under no more than a few seconds of operation under heavy signals, heavy input, and very often, most often, the fine wire of a moving coil was brought out to a point on the diaphragm and then it was soldered and attached to a strip or another wire, or anything

(Testimony of Herbert E. Metcalf.)

which had more strength and was more flexible than the lead wire. I have seen a number of different materials used for that purpose, not lately, but in the days when I first came with the company, from what I have been able to find out, such a device has become absolutely a necessity for dynamic speakers.

Q. In that connection I want you to refer to prior patents that have been offered here in evidence, including Edison No. 203,015, Rogers No. 297,168, Richards No. 521,220, Shreeve No. 602,174. State whether or not any such problem is encountered in any of these devices therein shown and described.

A. The Edison, No. 203,015, as far as I can see, is a microphone; it has no motion of its own. It is actuated by the voice impinging on the diaphragm and has no motion which would necessitate its [332] breaking its wire. Rogers is a telephone transmitter; Richards is a telephone transmitter. Shreeve is a telephone transmitter. I think that is all of them. They are telephone transmitters, and even though you got up close to them and spoke as loudly as you could, you could not move that diaphragm, I do not believe one tenth or even one hundredth, as far as the diaphragms of these dynamic speakers move. These speakers move, as has been stated, from one tenth to one eighth under full excitation and the strip of flexible material did not break.

Q. You have heard some discussion here as to articles and devices made by Rice & Kellogg. Are you familiar with those?

(Testimony of Herbert E. Metcalf.)

A. I am.

Q. Will you state in respect to date just where they bear any relationship to the Magnavox devices that you have been discussing?

A. In reference to the date, did you say?

Q. Yes.

A. Well as far as I know, the Rice & Kellogg disclosure came after the devices which you have been discussing were made in the laboratory by the Magnavox Company.

Q. That is the conical diaphragm?

A. Yes; we were working in the laboratory on many types of diaphragms long before we ever put anything on the market.

Q. That is the device that Mr. Miller referred to here as the Greaves application?

A. Yes.

Q. And those structures went back to when?

A. They went back to the early part of 1924, as I remember it.

Q. In other words, then, there was nothing in this Rice & Kellogg disclosure that was not already in the possession of Magnavox?

A. I would not say that, because if it had been, they would not have gotten any patent. There are certain features of their invention that were new to them, but the general idea of using a cone diaphragm in the way that they did use it did not disclose anything new to us. [333]

Q. You were an engineer there at the Magnavox

(Testimony of Herbert E. Metcalf.)

Company at that time?

A. Yes.

Q. And so far as the conical diaphragm was concerned, why did you not file an application for patent on that?

Mr. MILLER: Objected to as immaterial, irrelevant and incompetent.

The COURT: Overruled and exception.

A. Due to the fact that we had had, in our laboratories, cone diaphragms hitched to dynamic drives for a long time, and the fact that the cone diaphragms were old, and the type of drive did not seem to have anything particularly new about it, we did not even consider applying for a patent until it became quite evident that Rice & Kellogg, one or both, had been doing something along that line, and then of course it was up to us to be diligent, and if there was anything patentable, to protect our company.

Cross-Examination by Mr. Miller:

I was in the regular employ of The Magnavox Company from October, 1920, until February, 1928, and received a salary for my services. I had some stock in The Magnavox Company, but I do not own any stock in that company at the present time. I sold it shortly after I left their employ. My office now is at 57 Post St., San Francisco, where I am associated with a Mr. Lippincott, whose business is the soliciting of patents. I do not solicit patents. Mr. Lippincott was a former employee of The

(Testimony of Herbert E. Metcalf.)

Magnavox Company. As to the implement that I tested at Bolling Field, it was a dynamic speaker and it is my recollection that the apparatus was brought to the Field the first time sometime before April, 1921. To the best of my knowledge, both types of instruments were investigated at Bolling Field; that is, the flat coil and the round coil. There was a horn at- [334] tached to the implement. At Bolling Field we had a number of radio receiving sets and also a phonograph drive, and we played radio and we played the time-signals from Arlington. I remember we amplified and heard them across the Field. The only necessity for such apparatus was that I had been given orders to test out the devices under varying circumstances. The flat coil that I referred to is the one shown in Pridham and Jensen Patent 1,366,988, and the annular coil which I used is shown in Patent 1,448,279. We sent a man out to the extreme limit of the Field, over by the river (the Potomac River runs there; I imagine it is between 2 and 3 miles) and we talked through the microphone and he listened, and the sound came out of the mouth of the horn. In regard to the device which I used from the aeroplane, we had a standard aeroplane radio telephone transmitter and receiver which was supplied through the Air Service, through Government sources. We had a radio set that had both a transmitter and a receiver, so that we could send and receive from the plane. I talked into the microphone and on the

(Testimony of Herbert E. Metcalf.)

plane we had a radio telephone transmitter set which permitted us to broadcast exactly the same way as the modern KPO station up here, for instance, except that it was in the plane while the plane was flying. Down at the Treasury steps there was an antenna receiver and radio receiving set and amplifiers and a horn just like we have today. Transmission between the plane and the ground was by radio. We did make instruments where we put the horn in the plane; but that was not at this time.

Mechanical efficiency consists of parts of the device put together in such a way that the clearances, measurements and such are uniform and that they stay that way. That is a matter of design; skilled design and good workmanship combined. To get [335] this mechanical efficiency it must be at least such as taught by the Pridham and Jensen patent.

Q. The same applies to the cone construction, does it not; everything must be arranged in order and in proportion, and well built?

A. That is so.

Q. If that is the case, the cone diaphragm construction would be mechanically efficient, would it not?

A. It would if it was constructed in accordance with these teachings, the teachings of the Pridham and Jensen patent.

The cone device has not anything to do with the teachings but the method of supporting the center

(Testimony of Herbert E. Metcalf.)

pole piece certainly has. By the method of supporting the center pole piece I mean the spacing device. Spacing devices were not old in that connection. I do not see them in any of these prior patents. I do not see a spacing device in the patent of Sir Oliver Lodge applied to the pot-type of magnet. This figure in the little blue book which represents Fig. 5 in the Lodge printed patent does not show in yellow a spacing device. In the Milliken patent No. 262,811 there is a device which holds the two magnets in place. There is no other support for that, that I can see. Whether they act as a spacer or not I could not say. I have not read the patent.

The other thing which I said contributed to the efficiency of the machine was acoustical efficiency. This involves properly designed means for setting the air in vibration, soundbox and diaphragm. The soundbox and diaphragm would not make a better construction than the cone construction. It is all according to how you design the devices to go with it. As to what devices go with it, there would be a horn and a baffle; anything you want to use with it. The magnetic efficiency construction of the patent is a properly designed pot with a magnetic coil and minimum magnetic leakage and loss. I would consider a properly designed pot of this sort was where the air gap was as small as possible. Possibly the prior art shows narrow air gaps, but just because they show an air gap does not mean that they have magnetic efficiency. The Siemens Patent 4,685 un-

(Testimony of Herbert E. Metcalf.)

doubtedly shows a narrow air gap, but not a magnetizing system that I could call of great efficiency. So far as the air gap is concerned it looks [336] all right. That is not true of the patent to Milliken, 256,795. It does not look like a narrow air gap. There is a big air gap; a big space around the coil. The Pollak Patent 939,625 shows two air gaps. An air gap is a gap in the magnetic circuit, and there are two gaps in this magnetic circuit, and it is equivalent to one gap. They are in series. When you combine them together it is not a narrow air gap; it is a double reluctance. Pollak does show a rather narrow air gap. The art prior to the Pridham and Jensen patent shows narrow air gaps. In so far as the efficiency depends on a narrow air gap alone, these other devices would be considered efficient in that respect.

I am not now employed by The Magnavox Company. They asked me to testify for them. We have not had any discussion about payment for my time. I expect to get paid for my time. I have no regular fees because I do not do this regularly. I expect to get compensation.

By stipulation, depositions taken in prior litigation and consisting of the testimony of Stafford W. Warner, Bernard H. Linden, Harry I. Zemansky, and Chris Eiferle, respectively, were offered by plaintiff and considered as having been read in evidence, said depositions being as follows: [337]

(San Francisco, Oct. 11, 1929)

BERNARD H. LINDEN,

a witness on behalf of plaintiff.

Direct Examination by Mr. Loftus:

My residence is 906 San Jose Ave., Albany, California. My occupation is Supervisor of Radio, Sixth Radio District, Department of Commerce, U. S. Government. I have been supervisor since the death of Col. J. F. Dillon. Prior to that, as assistant radio inspector and as radio inspector in the same office since the early part of 1917. My experience in connection with telephony and radio began, I should say, in the year 1906 or 1907. More definitely, that is, I took a more active interest in 1909 than previously. From the time that I began to make my own living until the present date it has been my sole means of livelihood.

I cannot answer as to the exact date the first loudspeaker of a moving coil type came to my notice, but it was considerably before the year 1921. Pardon me, I would not say "considerably" in years, but some time before 1921. It was called a Magnavox loudspeaker of the dynamic type. At this time, when I first learned of the Magnavox dynamic speaker, there were no other loud speakers on the market that I knew of manufactured as such.

There was a need in the trade for a loudspeaker prior to the time when I first learned of the Magnavox.

When I first became acquainted with the Magnavox loudspeaker it was used as a public address sys-

(Deposition of Bernard H. Linden.)

tem, you might say. In fact, in the year 1921 it was used in connection with such a system. In the year 1921 I personally used it as such to amuse the crowds at the place of business where I was a partner. The Magnavox people were manufacturing such a system for use at that time, and we had on sale in our place of business, such apparatus. Then, of course, it was used extensively for radio. The name of the [338] partnership I was in was Warner & Linden, in the City of San Francisco. I may mention here that there was an interruption in my service with the Supervisor's Office for three months during the time that I opened that store down at 350 Market St. I think before in my testimony I mentioned that I had been associated with that office from 1917. I do not believe, though, that I said without a break. I think that was the only break that occurred.

The attention attracted to the trade at the time we introduced this Magnavox speaker is shown by this: Whenever it was operated at the store we could hardly move around the street on account of the crowd that would come in to listen. There was a great demand, obviously, for the speaker, inasmuch as there were no other speakers manufactured or for sale at that time.

We sold these Magnavox speakers to considerable extent. In fact, the other equipment that we could sell at that time was something that we had to assemble. We would take an old-type ear receiver

(Deposition of Bernard H. Linden.)

and bush it and put an old phonograph horn on it, which would not handle much volume; the Magnavox speaker was the only speaker manufactured that we sold.

Cross-Examination by Mr. Mueller:

By "public address system" I mean a loud-speaker system capable of amplifying the voice so that a multitude would be able to hear what the speaker had to say, and in this particular case that is speaking by telephonic connection from a transmitter to the loudspeaker, and not by radio. Broadcasting originated for home entertainment long before the advent of the vacuum tube. It was first accomplished through a medium of transmitters, and not the vacuum tube. Many were interested in receiving such demonstrations as were put on by Jack McCarthy, as we knew him in those days, and the Dwyer Wireless Telephone Company. Radio [339] broadcasting, such as we know it to-day, for home reception, increased in popularity, and became very popular around 1921 and 1922.

XQ. In 1921 what broadcast receivers were on the market?

A. In 1921 the receiver for home use that was in real demand, in fact it had such demand that local manufacturers were not able to supply the demand, was the Kennedy receiver. I think the Tom B. Kennedy organization amalgamated with the Wagner people, if I am not mistaken, and produced a

(Deposition of Bernard H. Linden.)

receiver together. Subsequently, I think it was discontinued, for some reason or other. I have an idea that Tom B. Kennedy is now manufacturing receivers again under his own name, but I cannot swear to that. I believe that is so. In 1921 I think the Sunnyvale Radio Shop was manufacturing a receiver of the regenerative type. I think also Ord was. Both of them were working under the Armstrong patents. The Sunnyvale Radio Shop had quite an establishment at Sunnyvale. In fact, they went under production there with a new factory, as I recall it. That may have been in the early part of 1922. I am not sure of the exact date. It may have been a little later when they went under production in the new factory at Sunnyvale. Tom Lambert was the engineer in charge. They went under production to such a great extent that through—well, I don't know, it may have been mismanagement or it may have been because of going into the business too extensively with not sufficient capital behind them, the firm I believe went bankrupt. I am not certain.

As to the power that was delivered by those two receivers, some of the receivers at that time, as I recall it, were manufactured with tuning units alone; that is, I mean the receiver proper, and without the detector tube or panel being an integral part of the receiver. Others were manufactured with the detector—I am [340] not certain whether any amplifiers were included in any of the receivers proper, but separate amplifiers were pro-

(Deposition of Bernard H. Linden.)

vided. I know that we sold a Magnavox power amplifier for the purpose of operating their power loudspeaker. At that time it was a Magnavox horn speaker that we sold. The horn type was the only type Magnavox speaker we sold. On those two broadcast receivers that were on the market in 1921 and 1922, there was sufficient power available from either of them to operate the Magnavox loudspeaker, but being of a power type it required for satisfactory operation and real volume a power amplifier such as was usually supplied. The speaker could be operated with the receiver, itself. You could hear it throughout the room. Naturally, a person would want a volume commensurate with the size of the room, and to get that volume he would add an amplifier to increase the volume. It could be incorporated in the same sets; in fact, sets were sold at the time with amplifiers incorporated. Composite sets of all sorts were built up and sold in those days; in 1921. I think, if I am not mistaken, that the Leo J. Meyberg people manufactured a receiver at that time with two stages of amplification included in the receiver itself. I cannot swear to the date, but I am quite sure it was at that time, in 1921 or 1922.

(San Francisco, Oct. 15, 1929)

Deposition of

STAFFORD W. WARNER

a witness on behalf of plaintiff.

Direct Examination by Mr. Loftus:

I am a co-partner in Warner Brothers, doing a retail business in San Francisco and Oakland, E. N. Warner and S. W. Warner are the co-partners. We have been doing a retail radio business since about 1920 in Oakland and San Francisco. I have been connected with radio, amateurishly, for about 20 years. I was a young fellow when I started to take up the study of telegraphy.

The first commercial loudspeaker of a moving coil type to come to my attention was the "Magnavox". It was also the first one that I had any connection with in retail sales or uses. I first heard of the Magnavox loudspeaker about 1920; that is, the R-2 and the R-3, I believe, if the numbers are right.

Prior to that time there was need for a loudspeaker. We would have liked to have had at that time something to make something audible to crowds. I was not very well up on the Magnavox equipment to do that, and so, therefore, we used just a Baldwin unit, as it was called, put out by the Nathaniel Baldwin Company of Salt Lake City. We took a lot of long papier mache horns from the Kohler & Chase Company; we made loudspeakers from them, using the Type C magnetic type units. They were the loudest speaking small unit that we

(Deposition of Stafford W. Warner.)

could get and put onto a horn to make it loud. We used many of them at that time, using them both for radio and speaking positions—speaking to small crowds out in places, and in different ways where we wanted to make ourselves heard.

This modified Baldwin device was just for small crowds I might say. We could not be heard very far. It was used with crowds very close to the instrument. We used it for ball games, [342] and things like that. It was not a very satisfactory device. The Magnavox Company put out the R-2 and R-3, I think it was R-2, which we used with an amplifier. We sold many of them about that time to start them off. People were much interested in them, and we sold many of them at that time. The Magnavox instrument was received very well by the trade and by the public. It seemed to be liked by them very much. They seemed to like it very well on account of its being plain and distinct. It did come out loud. Everything that was spoken into the microphone or amplifier was loud with it. We built up apparatus at times to make it louder. The Magnavox Company had a very satisfactory amplifier, but it was very expensive. Some of the amateurs liked to build their own amplifier to make the Magnavox still louder. The Magnavox would throw out these sounds to the crowds where it was used, such as down in front of the "Examiner" office, in speaking to the crowds on the street. We also had it at schools for gradu-

(Deposition of Stafford W. Warner.)

ation exercises. We had it over in Oakland at a traffic regulation show. They had some kind of an exhibit there and we used it at the Auditorium. Also at several more places where it was very satisfactorily received by the people.

We sold many thousands of dollars worth of these Magnavox Loudspeakers, the R-2 and the R-3. Our firm probably is one that has sold the most of them about the Bay. We had at one time orders in for as many as 500, and the Magnavox Company could not furnish them, could not furnish the stock fast enough for us. We used to have to use our own pick-up delivery and go to their places and get from them. We used to make several trips a day. As fast as they could manufacture them we would be given our pro rata order. We used up many speakers that way. Sometimes we had them delivered to our firm on trucks. We used probably many thousands of dollars [343] worth, sold them to retail customers in San Francisco and Oakland. That was probably from 1921 or 1922 up to 1924 or 1925. We seemed to have had a larger distribution at that time than a little bit after that, on account of the shape of the horn. It seemed to detract from the beauty of the instrument, and people were getting fed up on the shape of the horn. They wanted furniture. In our retail business we sort of had to drop out of it for the time being, the sale was getting smaller, and then we were getting into cabinet

(Deposition of Stafford W. Warner.)

work, more of the paper diaphragm type. I am not so well up on explaining any of the manufacturing points of the Magnavox. I am more interested in the sale of the Magnavox product. At that time we sold a big quantity at retail, both in San Francisco and Oakland.

Cross-Examination by Mr. Mueller:

We sell the Magnavox products at this time and have been selling Magnavox products since about 1920. We sold their horn type of speaker, the R-2 and R-3. I could not tell you much on the construction of the mechanism inside the base, although it was the movable coil type. I could not explain to you how the diaphragm and sound-box were constructed, because I am not technically acquainted with that. I am more on the retail end of selling merchandise in our store. [344]

TESTIMONY OF HARRY I. ZEMANSKY.

a witness for plaintiff in rebuttal.

Direct Examination by Mr. Loftus:

I am now and since 1913 have been engaged in the radio or electrical business. I originally started to work for a firm called the Pacific States Electrical Company, which eventually became a subsidiary of the General Electric Company; I worked for them from that time up to the war, when I

(Deposition of Harry I. Zemansky.)

enlisted and served in the Navy. Then I came back to work for them for a very short time, and then I went to work for a company called the Marine Electric Company, and worked for them for several years, and then I took charge of the Radio Department in the White House, a concession which I now own.

I am familiar with a loudspeaker known as the Magnavox Electrodynamic Loudspeaker. I first learned of that general type of instrument about 1919, mostly through the newspapers and different magazines that youngsters subscribe to interested in radio in an amateur way.

Q. Prior to that time was there any demand, so far as you know from your contact with the electrical business, for a loudspeaker?

A. The company I worked for was supplying ships with electrical equipment, and also repairing the electrical equipment on these ships, and at that time the operators were very much interested in the Magnavox and were using it themselves, in fact buying it for their own personal use to receive the signals. Prior to that time there was a station called KDN, located at the Fairmont Hotel, and they were broadcasting phonograph records, and they were using that to further their own entertainment.

Q. So that prior to 1919 or 1920 there was a demand for a loudspeaker?

A. Yes, I would say there was a demand. I

(Deposition of Harry I. Zemansky.)

can [345] recall an incident where we could have used one very nicely back in 1912. At that time, in the Presidential election, Wilson was the candidate, and they first announced his returns over the radio from station KDN; they were trying to reach a station in San Jose operated by Professor Herald. I can remember the folks calling in the neighbors to hear this. We would pass the earphones from one to the other. At that time we could have used a loudspeaker very nicely:

Q. To your knowledge was there any loudspeaker made commercially and sold prior to the time you first learned of the Magnavox?

A. There was a form of speaker that we made up, ourselves, which was sold. It was more or less of a magnetic earphone with a paper cone on it. You could set up any kind of earphones. Then there was the Baldwin. That was the only type of speaker we knew of at that time.

Q. That was the magnetic type?

A. That was the magnetic type.

Cross-Examination by Mr. Wilkinson:

My knowledge of radio has been acquired through my business connections here in San Francisco.

Q. Do you remember that as far back as 1915 loudspeakers were employed in auditoriums and grandstands of baseball parks?

A. I recall publicity to that effect, that there were loudspeakers used. I believe the Magnavox people gave a demonstration here about that time.

(Deposition of Harry I. Zemansky.)

Q. Before your knowledge of the Magnavox, did you know that other loudspeakers, such as the Automatic Electric Company's loudspeakers, were being installed in depots and hotels?

A. No, I did not.

TESTIMONY OF CHRIS EIFERLE,

a witness for plaintiff in rebuttal.

Direct Examination by Mr. Loftus:

I am at present engaged in the radio business. I started in in an amateur way in 1908, as an amateur wireless enthusiast. When I first became employed in radio was in the latter part of 1919. I was then employed by Warner Bros. in San Francisco.

I am familiar with the loudspeaker known as the Magnavox electrodynamic speaker. 1915 was really the first time I heard of a Magnavox dynamic loudspeaker. That was in connection with public address work in San Francisco, here, at the Auditorium, I believe it was, if I remember correctly. Then again later on in about 1920 the auditorium in Oakland was having a Public Food Show; at that time if one party spoke in one end you could not hear a sound at the other end on account of the acoustics of the building. Through a friend of mine they told me to see the head of the Auditorium and see if I could not get in some

(Deposition of Chris Eiferle.)

loudspeakers, or some equipment in there so that they could hear. So I got in touch with the Magnavox Company, which was located in Oakland at that time, and they loaned us all the equipment to put in the Auditorium, so that the addresses and such as that could be heard throughout the whole arena.

At that time there were no other loudspeakers being made commercially or being sold on the market. In fact, before I even was in the sale of radios there was a big demand for speakers. There were none on the market, at all, with the exception of the earphone type. The earphone type was not satisfactory, because it was not audible enough.

Q. And this demand has existed for how long, to your knowledge?

A. Being an amateur in wireless at that time, the Fairmont Hotel here in San Francisco, at the station KDN, was broadcasting [346] phonograph records, and also, as stated about the President's speech, I received the same thing at my home. Quite a number of amateurs did want loudspeakers. There were none at all to be had. Of course, the radio really did not start then. It was mostly all amateurs that really wanted the speakers. Not alone that, but the public, itself, needed something to broadcast sound or speeches over a great distance. There was nothing on the market, at all, outside the Magnavox. And that demand existed, apart from radio broadcasting.

(Deposition of Chris Eiferle.)

Cross-Examination by Mr. Wilkinson:

Q. Your knowledge of loudspeakers and radio has been acquired through your business here in San Francisco?

A. Yes, sir.

Q. Do you know what was the construction of the dynamic Magnavox loudspeaker that you heard in 1915?

A. No, I could not say.

Q. When was it that you realized that there was a demand here for a loudspeaker, not merely for radio, but for transmitting speeches, when was that?

A. The first real demand was, I should say, in 1919, by the San Francisco "Examiner", which had offices in Oakland. They wanted to announce the football games in Berkeley on Saturdays, but they had no way at all to make such announcements to the public except through a megaphone.

Q. That was in 1919?

A. I believe that was in 1919.

Q. You did not know that as far back as 1915 loudspeakers were being installed in auditoriums, and stations, and hotels, and the grandstands of ball parks, did you?

A. Not within my recollection, no. [347]

Thereafter Mr. Miller, on behalf of the defendants, offered in evidence copy of Patent 1,243,755, dated Oct. 23, 1917, issued to Naeser, et al. Objection on the ground that it had not been pleaded and was no part of the proof at this stage of the case.

Objection overruled and exception allowed. The patent was thereupon marked "Defs'. Ex. NN." [348]

IT IS HEREBY STIPULATED AND AGREED that the foregoing STATEMENT OF EVIDENCE is a correct copy of the condensed trial record, with the testimony stated in narrative form.

Dated: Aug. 23, 1933.

CHAS. E. TOWNSEND,
WM. A. LOFTUS

Attorneys for Plaintiff.

JOHN H. MILLER
A. W. BOYKEN,

Attorneys for Defendants

Ernest Ingold, Inc., a corporation; and Stromberg-Carlson Telephone Manufacturing Company, a corporation, and Garnett Young & Co., a corporation.

The foregoing Statement of Evidence, consisting of 277 pages, is hereby approved.

Sept. 5, 1933

A. F. ST. SURE

U. S. District Judge.

[Endorsed]: Filed Sep 6 1933 [349]

[Title of Court and Cause No. 2615-S.]

NOTICE OF APPEAL.

TO DEFENDANT ABOVE NAMED, AND TO
JOHN H. MILLER AND A. W. BOYKEN,
ITS ATTORNEYS:

The above named plaintiff, The Magnavox Company, conceiving itself aggrieved by the final decree entered herein on or about April 1, 1933, dismissing the Bill of Complaint of the plaintiff herein, with costs and disbursements, hereby respectfully appeals from the said Decree to the United States Circuit Court of Appeals for the Ninth Circuit, for the reasons set forth in the Assignment of Errors filed herewith, and prays that a citation be issued as provided by law, to the above named defendant, ERNEST INGOLD, INC., a corporation, commanding it to appear before said Circuit Court of Appeals to do and receive what may appertain to justice to be done in the premises; that a transcript of the pleadings, proceedings, testimony, exhibits, and orders, together with a copy of the Opinion of this Court filed in this cause, on which said Decree was entered, duly authenticated by the Clerk of the Court, be transmitted to the United States Circuit Court of Appeals for the Ninth Circuit, under the rules in such cases made and provided.

THE MAGNAVOX COMPANY,
By Chas. E. Townsend
Wm. A. Loftus

Its Attorneys.

Dated: June , 1933.

Received a copy of the within NOTICE OF APPEAL this 29th day of June A. D., 1933.

MILLER & BOYKEN,
for defendant.

[Endorsed]: Filed Jun 30 1933 [350]

[Title of Court and Cause No. 2615-S.]

ASSIGNMENT OF ERRORS.

Now comes plaintiff herein, The Magnavox Company, and makes the following assignment of errors upon which it will rely upon its prosecution in the above-entitled cause of an appeal from the Final Decree made by this Honorable Court and entered herein on or about April 1, 1933.

I.

The Court erred in dismissing the Bill of Complaint.

II.

The Court erred in holding that Claim 8 of Patent 1,266,988 and Claim 8 of Patent 1,448,279 were not infringed by the structures of the defendant herein complained of.

III.

The Court erred in holding that said Claim 8 of Patent 1,266,988 and Claim 8 of Patent 1,448,279 must, on account of the state of the prior art, be so limited in their scope as not to be infringed by the devices complained of.

IV.

The Court erred in holding that plaintiff was not entitled to the relief prayed for in its Complaint or any part thereof.

V.

The Court erred in failing to find that said Patents 1,266,988 and 1,448,279, in respect to the claims in suit, were valid and entitled to a sufficiently broad range of equivalents as to be infringed by defendant's structures complained of.

VI.

The Court erred in failing to give due weight to the evidence showing that the patents in suit were the first in the art to disclose those features of construction which made [351] it possible to manufacture commercially and supply the public with a workable loud speaker of the moving coil or dynamic type.

VII.

The Court erred in failing to give due weight to the evidence showing that the combination of elements set forth in Claim 8 of each of said patents in suit accomplished new and useful results, to-wit, prevention of breakage of the fine wires extending from the moving coil to the stationary binding posts, in the case of Patent 1,266,988; and the positive and accurate spacing and centering of the inner and outer pole pieces and moving coil and the maintenance of the same under all working conditions, in the case of Patent 1,448,279.

VIII.

The Court erred in failing to give due weight to the evidence showing that a demand had long existed for a loud speaker of the moving coil or dynamic type, which had not been supplied by structures shown and described in prior art patents and publications; that the patents in suit in and by the combinations set forth in the claim sued upon, fulfilled a long-felt want, and that the structures of the patents in suit were instantly adopted by the public and extensively used.

IX.

The Court erred in not granting the injunction prayed for in the Bill of Complaint.

X.

The Court erred in not granting the costs, damages, and accounting prayed for in the Bill of Complaint. [352]

THE MAGNAVOX COMPANY,

Plaintiff,

By Chas. E. Townsend,

Wm. A. Loftus,

Its Attorneys.

Dated: June 29, 1933.

Received a copy of the within Assigment of Errors this 29th day of June A. D., 1933.

MILLER & BOYKEN

for defendant

[Endorsed]: Filed Jun 30, 1933 [353]

[Title of Court and Cause No. 2615-S.]

ORDER ALLOWING APPEAL
AND FIXING APPEAL BOND.

Notice of Appeal and Assignment of Errors having been filed in this Court by the plaintiff herein, THE MAGNAVOX COMPANY, on or about the 30th day of June, 1933;

NOW, THEREFORE, IT IS ORDERED that the said appeal be and the same is hereby allowed; that the amount of plaintiff's bond on said appeal be and the same is hereby fixed in the sum of Five Hundred Dollars (\$500.00), the same to act as supersedeas of the judgment for costs and disbursements heretofore entered against said plaintiff.

IT IS FURTHER ORDERED that upon the filing of such security a certified transcript of the record and proceedings herein, in accordance with the Statutes and Equity Rules, be forthwith transmitted to said United States Circuit Court of Appeals for the Ninth Circuit.

Dated June 30, 1933.

A. F. ST. SURE

United States District Judge.

[Endorsed]: Filed Jun 30 1933. [354]

[Title of Court and Cause No. 2615-S.]

APPEAL BOND.

KNOW ALL MEN BY THESE PRESENTS, that FIDELITY AND DEPOSIT COMPANY OF

MARYLAND, a corporation organized and existing under the laws of the State of Maryland and duly licensed to transact a surety business in the State of California, is held and firmly bound unto ERNEST INGOLD, INC., a corporation, defendant in the above-entitled suit, in the penal sum of Five Hundred Dollars (\$500.00), lawful money of the United States, to be paid to said defendant, its successors, assigns, or legal representatives, for which payment, well and truly to be made, said FIDELITY AND DEPOSIT COMPANY OF MARYLAND binds itself, its successors and legal representatives, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that WHEREAS, the above named plaintiff, THE MAGNAVOX COMPANY, a corporation, has prosecuted an appeal to the United States Circuit Court of Appeals for the Ninth Circuit, to reverse the judgment of the District Court, Northern District of California, Southern Division, on or about April 1, 1933, dismissing plaintiff's Bill of Complaint with costs to defendant;

NOW, THEREFORE, the condition of this obligation is such that if the above named plaintiff, THE MAGNAVOX COMPANY, [355] shall prosecute its said appeal to effect and answer all costs if it fail to make its plea good, then the above obligation to be void; otherwise to remain in full force and virtue.

This recognizance shall be deemed and construed to contain the "express agreement" for summary

judgment, and execution thereon, mentioned in Rule 34 of the District Court.

FIDELITY AND DEPOSIT COMPANY
OF MARYLAND,

[Seal]

By D. E. Gorton

Attorney in Fact

Attest: C. A. Bevans Agent

APPROVED this 30th day of June, 1933,

A. F. ST. SURE

U. S. District Judge.

State of California,

City and County of San Francisco.—ss.

On this 30th day of June, A. D. 1933, before me, Emily K. McCorry, a Notary Public in and for the City and County of San Francisco, residing therein, duly commissioned and sworn, personally appeared D. E. Gorton, Attorney-in-Fact, and C. A. Bevans, Agent, of the Fidelity and Deposit Company of Maryland, a corporation, known to me to be the persons who executed the within instrument on behalf of the corporation therein named and acknowledged to me that such corporation executed the same, and also known to me to be the persons whose names are subscribed to the within instrument as the Attorney-in-Fact and Agent respectively of said corporation, and they, and each of them, acknowledged to me that they subscribed the name of said Fidelity and Deposit Company of Maryland thereto as principal and their own names as Attorney-in-Fact and Agent respectively.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the City and County of San Francisco the day and year first above written.

[Notarial]

EMILY K. McCORRY

[Seal]

Notary Public in and for the City and County of San Francisco, State of California.

My Commission Expires January 16, 1935.

[Endorsed]: Filed Jun 30 1933 [356]

[Title of Court and Cause No. 2615-S.]

PRAECIPE FOR TRANSCRIPT OF RECORD
ON APPEAL UNDER EQUITY RULE 75.

To the Clerk of the Above-Entitled Court:

Please prepare a Transcript of Record to the United States Circuit Court of Appeals, upon which the appeal heretofore taken by plaintiff from a final decree in the above-entitled cause shall be heard, including therein the following documents:

1. Bill of Complaint.
2. Minutes of Court allowing Motion to Quash Service against Atwater Kent Manufacturing Company;
3. Answer of Ernest Ingold, Inc.
4. Amendments to Answer.
5. Second Amendment to Answer of Defendant.
6. Order for Dedimus Potestatem.

7. Stipulation identifying Defendant's Loud Speaker and re Certain Depositions.

8. Memorandum and Order dated March 17, 1933.

9. Order Directing Dismissal of Bill of Complaint, March 18, 1933.

10. Findings of Fact and Conclusions of Law. [357]

11. Plaintiff's Objections and Exceptions to Defendant's Proposed Findings and Conclusions, and Plaintiff's Proposed Findings and Conclusions.

12. Minutes of Court, April 11, 1933, overruling Plaintiff's Exceptions to Defendant's Findings of Fact and Conclusions of Law.

13. Decree.

14. Notice of Appeal.

15. Assignment of Errors.

16. Order Allowing Appeal and Fixing Appeal Bond.

17. Citation on Appeal.

18. Appeal Bond.

19. Condensed Statement of Evidence.

20. Order Approving Narrative Statement of Evidence.

21. This Praecipe.

22. Certificate of Clerk.

23. The following Exhibits:

Plaintiff's Exhibit 1, Drawing;

Plaintiff's Exhibit 5, Patent 1,266,988;

Plaintiff's Exhibit 6, Patent 1,448,279;

Plaintiff's Exhibit 7, Photostat of page from book of Dayton C. Miller;

Plaintiff's Exhibit 12, Chart;

Plaintiff's Exhibit 16, Chart;

Plaintiff's Exhibit 18, Binder of Patents containing the following:

United States Patents to:

Maxwell	216,051	June 3, 1879
Dann and Lapp	338,660	Mar. 23, 1886
Duvelius	674,575	May 21, 1901
Shanks	822,024	May, 29, 1906
Lumiere	986,477	Mar. 14, 1911
Lumiere	1,036,529	Aug. 20, 1912
Johnson	1,180,401	Apr. 25, 1916

[358]

British Patent to Stroh, Number 3,393, of 1901.

Plaintiff's Exhibit 19, Chart;

Plaintiff's Exhibit 21, Chart of Magnavox Device;

Plaintiff's Exhibit 26, Drawing of Electrical Connections.

Defendant's Exhibit C, Bell Patent 186,787;

Defendant's Exhibit D, Siemens Patent 149,797;

Defendant's Exhibit E, British Patent to Siemens, No. 4,685;

Defendant's Exhibit F, Cuttriss and Redding Patent 242,816;

Defendant's Exhibit G, Cuttriss and Milliken Patent 256,795;

Defendant's Exhibit H, Milliken Patent 262,811;

Defendant's Exhibit I, Mather Patent 387,310;

Defendant's Exhibit J, Lodge (British) Patent 9,712;

Defendant's Exhibit K, Pages from "The Electrician";

Defendant's Exhibit N, Pages from "The Electrical Engineer";

Defendant's Exhibit O, Pearson Patent 903,745;

Defendant's Exhibit P, Pollak Patent 939,625;

Defendant's Exhibit Q, Oliver (French) Patent 404,286;

Defendant's Exhibit R, British Patent to Oliver, No. 12,857;

Defendant's Exhibit S, Oliver Patent 951,695;

Defendant's Exhibit T, Johnsen Patent 1,075,786;

Defendant's Exhibit U, Hopkins Patent 1,271,529;

Defendant's Exhibit V, British Patent to Edison, No. 2,909;

Defendant's Exhibit W, Edison Patent 203,015;

Defendant's Exhibit X, Rogers Patent 297,168;

Defendant's Exhibit Y, Richards Patent 521,220;

Defendant's Exhibit AA, File Wrapper and Contents of Patent 1,448,279;

Defendant's Exhibit BB, File Wrapper and Contents of Patent 1,266,988;

Defendant's Exhibit CC, Kellogg Publication; [359]

Defendant's Exhibit DD, Comer Patent 1,137,186;

Defendant's Exhibit EE, British Patent to Far-
rand, No. 178,862;

Defendant's Exhibit FF, Drawing of R. C. A.
104 Speaker;

Defendant's Exhibit GG, Certified Copy of In-
terference between Greaves and Kellogg;

Defendant's Exhibit HH, Patents 1,051,113, 1,088,283, and 1,105,924, to Pridham and Jensen;

Defendant's Exhibit II, French Patent to Pollak, No. 393,241;

Defendant's Exhibit JJ, Pridham and Jensen Patent 1,329,928;

Defendant's Exhibit KK, Drawing of Johnson patent;

Defendant's Exhibit NN, Patent 1,243,755, to Naeser, et al.

24. Stipulation re Transmittal of Exhibits to Court of Appeals.

Dated, this 8th day of August, 1933.

CHAS. E. TOWNSEND

WM. A. LOFTUS

Attorneys for Plaintiff

Service of copy of the within Praecipe for Transcript of Record on Appeal Under Equity Rule 75, admitted this 8th day of August, A. D., 1933.

JOHN H. MILLER

for Defendant.

[Endorsed]: Filed Aug - 9 1933 [360]

[Title of Court and Cause No. 2615-S.]

STIPULATION AND ORDER RE TRANSMITTAL OF EXHIBITS TO CIRCUIT COURT OF APPEALS.

IT IS HEREBY STIPULATED AND AGREED by and between the parties hereto, that

all of the original exhibits shall be withdrawn from the files of the above entitled Court and of the Clerk thereof, and by said Clerk be transmitted to the United States Circuit Court of Appeals for the Ninth Circuit, as a part of said Record on Appeal; said original exhibits to be returned to the files of the above entitled Court upon the determination of said appeal by said Court of Appeals.

Dated this 8th day of August, 1933.

CHAS. E. TOWNSEND,
WM. A. LOFTUS

Attorneys for Plaintiff

JOHN H. MILLER

A. W. BOYKEN

Attorneys for Defendant

It is so ordered.

HAROLD LOUDERBACK

U. S. District Judge

[Endorsed]: Filed Aug 9 1933 [361]

[Title of Court and Cause No. 2616-S.]

NOTICE OF APPEAL.

To Defendants Above Named and to Their Attorneys:

The above named plaintiff, The Magnavox Company, conceiving itself aggrieved by the final decree entered herein on or about April 1, 1933, dismissing the Bill of Complaint of the plaintiff herein, with costs and disbursements, hereby re-

spectfully appeals from the said Decree to the United States Circuit Court of Appeals for the Ninth Circuit, for the reasons set forth in the Assignment of Errors filed herewith, and prays that a citation be issued as provided by law, to the above named defendants, STROMBERG CARLSON TELEPHONE MANUFACTURING COMPANY, a corporation, and GARNETT YOUNG & CO., a corporation, commanding them to appear before said Circuit Court of Appeals to do and receive what may appertain to justice to be done in the premises; that a transcript of the pleadings, proceedings, testimony, exhibits, and orders, together with a copy of the Opinion of the Court filed in this cause, on which said Decree was entered, duly authenticated by the Clerk of the Court, be transmitted to the United States Circuit Court of Appeals for the Ninth Circuit, under the rules in such cases made and provided.

THE MAGNAVOX COMPANY,
By CHAS. E. TOWNSEND
WM. A. LOFTUS

Its Attorneys.

Dated: June , 1933.

Received a copy of the within NOTICE OF APPEAL admitted this 29th day of June A. D., 1933.

MILLER & BOYKEN

for defendant.

[Endorsed]: Filed Jun 30 1933 [362]

[Title of Court and Cause No. 2616-S.]

ASSIGNMENT OF ERRORS.

Now comes plaintiff herein, The Magnavox Company, and makes the following assignment of errors upon which it will rely upon its prosecution in the above-entitled cause of an appeal from the Final Decree made by this Honorable Court and entered herein on or about April 1, 1933.

I.

The Court erred in dismissing the Bill of Complaint.

II.

The Court erred in holding that Claim 8 of Patent 1,266,988 and Claim 8 of Patent 1,448,279 were not infringed by the structures of the defendants herein complained of.

III.

The Court erred in holding that said Claim 8 of Patent 1,266,988 and Claim 8 of Patent 1,448,279 must, on account of the state of the prior art, be so limited in their scope as not to be infringed by the devices complained of.

IV.

The Court erred in holding that plaintiff was not entitled to the relief prayed for in its Complaint or any part thereof.

V.

The Court erred in failing to find that said Patents 1,266,988 and 1,448,279, in respect to the claims

in suit, were valid and entitled to a sufficiently broad range of equivalents as to be infringed by defendants' structures complained of.

VI.

The Court erred in failing to give due weight to the [363] evidence showing that the patents in suit were the first in the art to disclose those features of construction which made it possible to manufacture commercially and supply the public with a workable loud speaker of the moving coil or dynamic type.

VII.

The Court erred in failing to give due weight to the evidence showing that the combination of elements set forth in Claim 8 of each of said patents in suit accomplished new and useful results, to-wit, prevention of breakage of the fine wires extending from the moving coil to the stationary binding posts, in the case of Patent 1,266,988; and the positive and accurate spacing and centering of the inner and outer pole pieces and moving coil and the maintenance of the same under all working conditions, in the case of Patent 1,448,279.

VIII.

The Court erred in failing to give due weight to the evidence showing that a demand had long existed for a loud speaker of the moving coil or dynamic type, which had not been supplied by structures shown and described in prior art patents

and publications; that the patents in suit in and by the combinations set forth in the claims sued upon, fulfilled a long-felt want, and that the structures of the patents in suit were instantly adopted by the public and extensively used.

IX.

The Court erred in not granting the injunction prayed for in the Bill of Complaint.

X.

The Court erred in not granting the costs, damages, [364] and accounting prayed for in the Bill of Complaint.

THE MAGNAVOX COMPANY,
Plaintiff,
By CHAS. E. TOWNSEND
WM. A. LOFTUS
Its Attorneys.

Dated: June. , 1933.

Received a copy of the within ASSIGNMENT
OF ERRORS this 29th day of June A. D., 1933.

MILLER & BOYKEN
for defendant.

[Endorsed]: Filed Jun 30 1933. [365]

[Title of Court and Cause No. 2616-S.]

ORDER ALLOWING APPEAL
AND FIXING APPEAL BOND.

Notice of Appeal and Assignment of Errors having been filed in this Court by the plaintiff herein, THE MAGNAVOX COMPANY, on or about the 30th day of June, 1933;

NOW, THEREFORE, IT IS ORDERED that the said appeal be and the same is hereby allowed; that the amount of plaintiff's bond on said appeal be and the same is hereby fixed in the sum of Five Hundred Dollars (\$500.00), the same to act as supersedeas of the judgment for costs and disbursements heretofore entered against said plaintiff.

IT IS FURTHER ORDERED that upon the filing of such security a certified transcript of the record and proceedings herein, in accordance with the Statutes and Equity Rules, be forthwith transmitted to said United States Circuit Court of Appeals for the Ninth Circuit.

Dated June 30, 1933.

A. F. ST. SURE

United States District Judge.

[Endorsed]: Filed Jun 30 1933 [366]

[Title of Court and Cause No. 2616-S.]

APPEAL BOND.

KNOW ALL MEN BY THESE PRESENTS, that FIDELITY AND DEPOSIT COMPANY OF MARYLAND, a corporation organized and existing under the laws of the State of Maryland and duly licensed to transact a surety business in the State of California, is held and firmly bound unto STROMBERG CARLSON TELEPHONE MANUFACTURING COMPANY, a corporation, and GARNETT YOUNG & CO., a corporation, defendants in the above-entitled suit, in the penal sum of Five Hundred Dollars (\$500.00), lawful money of the United States, to be paid to said defendants, their successors, assigns, or legal representatives, for which payment, well and truly to be made, said FIDELITY AND DEPOSIT COMPANY OF MARYLAND binds itself, its successors and legal representatives, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that WHEREAS, the above named plaintiff, THE MAGNAVOX COMPANY, a corporation, has prosecuted an appeal to the United States Circuit Court of Appeals for the Ninth Circuit, to reverse the judgment of the District Court, Northern District of California, Southern Division, on or about April 1, 1933, dismissing plaintiff's Bill of Complaint with costs to defendants;

NOW, THEREFORE, the condition of this obligation is such that if the above-named plaintiff,

THE MAGNAVOX COMPANY, shall prosecute its said appeal to effect and answer all costs if it fail to make its plea good, then the above obligation to be void; otherwise to remain in full force and virtue.

This recognizance shall be deemed and construed to contain the "express agreement" for summary judgment, [367] and execution thereon, mentioned in Rule 34 of the District Court.

FIDELITY AND DEPOSIT COMPANY
OF MARYLAND

[Seal]

By D. E. GORTON

Attorney in Fact

ATTEST: C. A. BEVANS Agent

APPROVED this 30th day of June, 1933.

A. F. ST. SURE

U. S. District Judge.

State of California

City and County of San Francisco.—ss.

On this 30th day of June, A. D. 1933, before me, Emily K. McCorry, a Notary Public in and for the City and County of San Francisco, residing therein, duly commissioned and sworn, personally appeared D. E. Gorton, Attorney-in-Fact, and C. A. Bevans, Agent, of the Fidelity and Deposit Company of Maryland, a corporation, known to me to be the persons who executed the within instrument on behalf of the corporation therein named and acknowledged to me that such corporation executed the same, and also known to me to be

the persons whose names are subscribed to the within instrument as the Attorney-in-Fact and Agent respectively of said corporation, and they, and each of them, acknowledged to me that they subscribed the name of said Fidelity and Deposit Company of Maryland thereto as principal and their own names as Attorney-in-Fact and Agent respectively.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the City and County of San Francisco the day and year first above written.

[Seal]

EMILY K. McCORRY

Notary Public in and for the
City and County of San
Francisco, State of California.

My Commission expires January 16, 1935.

[Endorsed]: Filed Jun 30 1933 [368]

[Title of Court and Cause No. 2616-S.]

STIPULATION RESPECTING FORM OF
RECORD ON APPEAL AND HEARING
OF APPEAL.

WHEREAS, at the trial of this cause in the United States District Court, the same was consolidated with Equity Cause Number 2615-S, The Magnavox Company vs. Ernest Ingold, Inc., and was heard upon the same evidence and proofs;

NOW, THEREFORE, subject to the approval of the Court, IT IS HEREBY STIPULATED that the appeal herein shall be heard upon one and the same transcript of record as the appeal in said cause Number 2615-S; that said transcript of record shall include the pleadings in this cause, the orders, decrees, findings of fact and conclusions of law, and exceptions thereto, notice of appeal, assignment of errors, order allowing appeal, bond on appeal, and citation, on file herein as set forth in the Praecipe in this cause, and the same Statement of Evidence as referred to in the Praecipe in Cause Number 2615-S.

IT IS FURTHER STIPULATED that all original exhibits offered in evidence in this case may be withdrawn from the files of the above entitled Court and of the Clerk thereof, and by said Clerk be transmitted to the United States Circuit Court of Appeals for the Ninth Circuit, as a part of said Record on Appeal, said original exhibits to be returned to the files of this Court upon determination of said appeal by said Circuit Court of Appeals.

Dated this 8th day of August, 1933.

CHAS. E. TOWNSEND

WM. A. LOFTUS

Attorneys for Plaintiff.

JOHN H. MILLER

A. W. BOYKEN

Attorneys for Defendant. [369]

The foregoing Stipulation is hereby approved, and an Order to the same effect is hereby made.

HAROLD LOUDERBACK

U. S. District Judge.

Service of copy of the within admitted this 8th day of August A. D. 1933.....

JOHN H. MILLER

for Appellee & Defendant.

[Endorsed]: Filed Aug. 9 1933 [370]

[Title of Court and Cause No. 2616-S.]

PRAECIPE FOR TRANSCRIPT OF RECORD
ON APPEAL UNDER EQUITY RULE 75.

To the Clerk of the Above-Entitled Court:

Please prepare a Transcript of Record to the United States Circuit Court of Appeals, upon which the appeal heretofore taken by plaintiff from a final decree in the above-entitled cause shall be heard, including therein the following documents:

1. Bill of Complaint.
2. Answer.
3. Amendments to Answer.
4. Second Amendment to Answer.
5. Stipulation Identifying Defendants' Loud Speaker and re Certain Depositions;
6. Memorandum and Order dated March 17, 1933;
7. Order Directing Dismissal of Bill of Complaint, dated March 18, 1933;

8. Findings of Fact and Conclusions of Law.
9. Plaintiff's Objections and Exceptions to Defendants' Proposed Findings and Conclusions, and Plaintiff's Proposed Findings and Conclusions.
10. Minutes of Court, April 11, 1933, overruling Plaintiff's Exceptions to Defendants' Findings of Fact and Conclusions of Law.
11. Decree.
12. Notice of Appeal.
13. Assignment of Errors.
14. Order Allowing Appeal and Fixing Appeal Bond.
15. Citation on Appeal.
16. Appeal Bond. [371]
17. Stipulation re Form of Record on Appeal.
18. This Praecepte.
19. Certificate of the Clerk.

Dated, this 8th day of August, 1933.

CHAS. E. TOWNSEND

WM. A. LOFTUS

Attorneys for Plaintiff.

Service of copy of the within Praecepte for Transcript of Record on Appeal Under Equity Rule 75 admitted this 8 day of August, A. D., 1933.

JOHN N. MILLER

for Defendants.

[Endorsed]: Filed Aug 9 1933. [372]

In the Southern Division of the United States District Court for the Northern District of California.

I, WALTER B. MALING, Clerk of the United States District Court, for the Northern District of California, do hereby certify that the foregoing 372 pages, numbered from 1 to 372, inclusive, contain a full, true, and correct transcript of the records and proceedings in the cases of THE MAGNAVOX COMPANY, vs. ATWATER KENT MANUFACTURING COMPANY, et al., No. 2615-S and THE MAGNAVOX COMPANY, vs. STROMBERG CARLSON TELEPHONE MANUFACTURING COMPANY, et al., No. 2616-S, as the same now remain on file and of record in my office.

I further certify that the cost of preparing and certifying the foregoing transcript of record on appeal is the sum of \$76.95 and that the said amount has been paid to me by the Attorneys for the Appellant herein.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said District Court, this 12th day of September A. D. 1933.

[Seal]

WALTER B. MALING, Clerk.

By J. P. Welsh

Deputy Clerk. [372½]

[Title of Court and Cause No. 2615-S.]

CITATION ON APPEAL.

United States of America.—ss.

The President of the United States to ERNEST INGOLD, INC., a corporation, GREETING: YOU ARE HEREBY CITED and admonished to be and appear before the United States Circuit Court of Appeals for the Ninth Circuit, to be held in the City of San Francisco, State of California, thirty days from date hereof, pursuant to an appeal filed in the Clerk's Office of the District Court for the Northern District of California, Southern Division, wherein THE MAGNAVOX COMPANY is appellant and you are appellee, to show cause, if any there be, why the decree in said appeal mentioned should not be corrected and why speedy justice should not be done to the parties in that behalf.

Given under my hand at the State of California, in the District and Circuit above named, this 30th day of June, in the year of our Lord one thousand nine hundred and thirty-three, [373] and of the Independence of the United States the one hundred and fifty-seventh.

A. F. ST. SURE

United States District Judge.

[Endorsed]: Received a copy of the within Citation on Appeal this day of June A. D., 1933.

MILLER & BOYKEN

for Defendant.

[Endorsed]: Filed June 30, 1933. [374]

[Title of Court and Cause No. 2616-S.]

CITATION ON APPEAL.

United States of America.—ss.

The President of the United States to STROMBERG CARLSON TELEPHONE MANUFACTURING COMPANY, a corporation, and GARNETT YOUNG & CO., a corporation, GREETING:

YOU ARE HEREBY CITED and admonished to be and appear before the United States Circuit Court of Appeals for the Ninth Circuit, to be held in the City of San Francisco, State of California, thirty days from date hereof, pursuant to an appeal filed in the Clerk's Office of the District Court for the Northern District of California, Southern Division, wherein THE MAGNAVOX COMPANY is appellant and you are appellees, to show cause, if any there be, why the decree in said appeal mentioned should not be corrected and why speedy justice should not be done to the parties in that behalf.

Given under my hand at the State of California, in the District and Circuit above named, this 30th day of June, in the year of our Lord one thousand nine hundred and thirty-three, [375] and of the Independence of the United States the one hundred and fifty-seventh.

A. F. ST. SURE

United States District Judge.

[Endorsed]: Received a copy of the within Citation on Appeal this 30th day of June A. D., 1933.

MILLER & BOYKEN

for Defendants. [376]

Filed Jun. 30, 1933. Walter B. Maling, Clerk.

Filed Sep. 14, 1933. Paul P. O'Brien.

[Endorsed]: No. 7284. United States Circuit Court of Appeals for the Ninth Circuit. The Magnavox Company, a corporation, Appellant, vs. Ernest Ingold, Inc., a corporation, Appellee. The Magnavox Company, a corporation, Appellant, vs. Stromberg Carlson Telephone Manufacturing Company, a corporation, and Garnett Young & Co., a corporation, Appellee. Transcript of Record. Upon Appeals from the District Court of the United States for the Northern District of California, Southern Division.

Filed Sep. 14, 1933.

PAUL P. O'BRIEN,

Clerk of the United States Circuit Court of Appeals
for the Ninth Circuit.

By Frank H. Schmid,

Deputy Clerk.

No. 7284

IN THE
United States Circuit Court of Appeals
For the Ninth Circuit

THE MAGNAVOX COMPANY (a corporation),
Appellant,

vs.

ERNEST INGOLD, INC. (a corporation),
Appellee.

THE MAGNAVOX COMPANY (a corporation),
Appellant,

vs.

STROMBERG-CARLSON TELEPHONE MANUFACTUR-
ING COMPANY (a corporation), and GARNETT
YOUNG & Co. (a corporation),
Appellee.

BRIEF ON BEHALF OF APPELLANT.

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File 1

MAR 2 - 1934



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Appellee.

BRIEF ON BEHALF OF APPELLANT.

STATEMENT OF THE CASE.

Involved herein are two different patent infringement suits. The patents sued upon are the same in both cases, and the structures alleged to infringe are alike. The two suits were consolidated and tried as one in the District Court for the Northern District of California, Southern Division. The plaintiff-appel-

lant, The Magnavox Company, is an Arizona corporation which, at the time of the commencement of the suits, had its principal place of business in Oakland, California. One suit is against Ernest Ingold, Inc., a California corporation, a distributor of the alleged infringing product, to-wit, Atwater Kent loud speakers manufactured by the Atwater Kent Company of Philadelphia. The other suit is against Stromberg-Carlson Telephone Manufacturing Company, a corporation of New York, manufacturer of the alleged infringing devices, to-wit, Stromberg-Carlson loud speakers. A Pacific Coast distributor of the Stromberg-Carlson loud speakers, to-wit, Garnett Young & Co., a California corporation, is also a defendant in this suit.

These loud speakers are used principally today in connection with radio receiving sets and for public address work.

In both suits the charge of infringement is based upon two patents, to-wit, Number 1,266,988, filed July 3, 1916, by Pridham and Jensen as inventors and issued May 21, 1918, to Commercial Wireless & Development Company, of San Francisco, California, which concern subsequently assigned to plaintiff-appellant, The Magnavox Company. The other patent is Number 1,448,279, filed April 28, 1920, by the same Pridham and Jensen, and issued March 13, 1923, to plaintiff-appellant, The Magnavox Company.

A third patent, to-wit, Number 1,579,392, dated April 6, 1926, was set up in the bills of complaint, but was withdrawn from suit prior to the trial.

The first-mentioned patent is entitled "Amplifying Receiver" and the second one, "Electrodynamic Receiver". Both have to do with loud speaking telephone receivers of the dynamic or moving coil type. At the trial the issues were limited to Claim 8 of each of these two patents.

The consolidated cases were tried before Honorable A. F. St. Sure, partly on depositions and partly on testimony taken in open court. The District Court in a memorandum and order appearing in the record at page 68, held:

"I find it unnecessary to pass upon the validity of the patents, limited as their interpretation must be by the state of the prior art. And after careful study of the patents, the prior art, the law, and the facts, I have reached the conclusion that there is no infringement of Claim 8 of either patent, and so find. The complaints will be dismissed with costs to defendants."

Findings of facts and conclusions of law were submitted by both sides, those proposed by plaintiff appearing at page 70. These were overruled and exceptions noted. Defendants' proposed findings appear at page 75. These were approved and entered herein. Said findings admit the ownership of the patents in plaintiff and jurisdiction of the parties and recite that no finding is made as to validity and that the claims in suit have not been infringed by the devices complained of. A final decree was entered, dismissing the bills of complaint in both cases.

The case now comes before this Court on an appeal from the final decrees dismissing the bills.

ERRORS RELIED UPON.

The assignment of errors appears at page 443. In substance the errors assigned and to be relied upon herein are as follows:

(1) That it was error to dismiss the bills and deny the relief prayed for.

(2) That it was error to find non-infringement of the particular claims of the two patents in suit, in the light of the law and the evidence.

(3) That it was error to hold that the patents in suit are or ought to be so limited by the state of the prior art as not to be infringed by the devices complained of, in view of the evidence to the effect

(a) That the patents in suit were the first in the art to disclose those features of construction which made it possible to manufacture commercially and supply the public with a workable loud speaker of the moving coil or dynamic type;

(b) That the patents in suit accomplished new and useful results of an important character;

(c) That a demand had long existed for a loud speaker of the moving coil or dynamic type which had not been supplied by structures shown and described in the prior art patents and publications and had been supplied by the structures of plaintiff's patents;

(d) That the structures covered by the patents in suit filled a long-felt want and were instantly adopted by the public and extensively used.

ARGUMENT.

There is nothing in the memorandum and order, nor in the findings of fact and conclusions of law, to indicate on what the conclusions were based to the effect that the patents in suit were limited by the prior art. The only prior art, as shown by the record, has to do with impractical and inefficient devices which were never produced commercially; and as one Court remarked in a similar situation, "One cannot make a good omelet out of bad eggs."

It would appear that the Trial Court, under a misapprehension of the law of patents, failed to consider the great benefits which these patents bestowed upon the public. If due consideration had been given to the rules of law in that respect, the finding of infringement would have followed as a matter of law, inasmuch as defendants' devices embody each and every element set forth in the claims in suit or an equivalent therefor.

In the findings of facts and conclusions of law submitted by defendants and adopted by the Trial Court, the scope of plaintiff's patents and the matter of infringement have been treated as questions of law. It is our earnest belief that the questions presented on this appeal are largely questions of law and that if the Trial Court had correctly applied the law as enunciated by this Court and the Supreme Court of the United States, a finding of infringement would have been the inevitable result.

GENERAL NATURE OF THE INVENTIONS INVOLVED
IN THE PATENTS IN SUIT.

Re Patent 1,266,988.

A copy of the first patent in suit, to-wit, Number 1,266,988, appears in the Book of Exhibits at page 357. This patent is known as the "flat coil" patent. Except for the feature of Claim 8 thereof, it represents an obsolete type of instrument. While it operated quite satisfactorily as compared with anything then or theretofore known or used in the way of a loud speaker, it was not until Pridham and Jensen arrived at the "round coil" construction of the second patent in suit, to-wit, Number 1,448,279, that the instrument might be said to be a commercially successful device capable of functioning under any and all conditions, in the hands of the public. In this connection, Mr. Pridham testified (R. 350):

"We found that in shipping these instruments which were constructed according to the first patent, the mechanical construction was such that the coil would not stay fixed, the air gap would not stay fixed. It was a horseshoe magnet and we had quite a bit of difficulty in the mechanical stability of the instruments. They would work perfectly in the laboratory and for demonstration. As a matter of fact, we sold about 200 of them altogether. They were not the mechanical type to stand up. They were the horse-shoe electro-magnet type and we discontinued that type after making about 200 from 1916 to 1919. The instruments that followed had a cylindrical pot and a cylindrical core." (R. 350.)

Referring to the drawings of the first patent, the horseshoe magnet 11 is provided with pole tips 12

spaced a slight distance apart to receive a flat or wedge-shaped coil 13. This coil is fastened rigidly to a sound reproducing diaphragm 23. The horseshoe magnet is energized by suitable field coils so as to create a strong magnetic flux in the gap occupied by the flat coil 13. Therefore, when telephonic currents or voice currents pass through the said coil 13, they cut the lines of force in the gap and the result is to vibrate the coil and its attached diaphragm so as to produce audible sounds corresponding in character to the voice currents but in a greatly amplified form.

The fine wires or strips 27 which lead to the coil 13 are carried along one face of the diaphragm, being adhesively secured thereto by shellac or otherwise, so that they move and vibrate with the coil and diaphragm. The diaphragm, of course, does not vibrate so violently at or near its periphery, it being held rigidly by the plates 25. Therefore the thin strips or lead wires at the points where they leave the diaphragm and pass on to the stationary binding posts 29, will be subjected to very little flexing; whereas if a direct connection were made between the moving coil and the stationary binding posts, there would be such an amount of bending and flexing of a very rapid nature as would cause frequent breakage of the wires, making it necessary to ship the instrument back to the factory for repairs. It is to this manner of arranging the lead-out wires of the moving coil so as to eliminate breakage or failure of the instrument, that Claim 8 of this patent is directed.

Re Patent 1,448,279.

A copy of this patent appears in the Book of Exhibits, at page 6. It will be seen that there is a magnetizing structure consisting of a pot-like casing or cylinder marked 14, closed at its ends by end plates, one of which is removable. Within the cylinder is an energizing coil marked 16, surrounding a core piece marked 12-17. One end of this core piece enters a circular aperture in the removable end plate, which aperture is only slightly larger than the top of the core-piece. Suitable means (ring 11) are provided within the casing for mounting this core-piece in exact concentricity in the circular aperture so that a very narrow air gap is left, into which is fitted a circular coil marked 4. This coil carries a number of turns of very fine wire through which the telephonic or voice currents pass. The circular coil is rigidly attached to a diaphragm 3 of the sound reproducing type. This diaphragm is suitably supported in a frame, referred to in the patent as a "sound box", which sound box or frame is directly attached to the removable end-plate of the pot-like structure.

When the coil 16 is energized from any suitable source of direct current, a strong magnetic field is created in the air gap formed between the top of the core-piece (called "inner pole") and the surrounding end plate (called "outer pole"). When the voice current is passed through the coil immersed in this strong magnetic field, it cuts the lines of force at right angles, with the result that the circular coil is caused to vibrate in a direction parallel with the walls forming the air gap, thus vibrating the sound re-

producing diaphragm and reproducing audible sounds corresponding in character to the voice currents. These sounds are of great intensity and are in faithful reproduction of the voice which originated the currents.

The characteristic feature of the so-called "dynamic loud speaker" is the moving coil centered in a very narrow air gap, across which gap a strong magnetic flux is created. The common type of receiver such as we find in telephones and in the earlier practices, where some sort of announcing system was desired, is what is generally referred to in the record as the "magnetic type", or "iron armature type", and is characterized by a vibrating armature which moves towards and from the pole pieces of a magnet. The force of this approach and recession of the armature toward the pole piece is not a straight line function of the voice currents, but obeys the inverse square law of magnetic attraction—this makes for unfaithful reproduction. On the other hand, the force acting on the moving coil of the dynamic type is a straight line function* of the voice currents and since the coil moves parallel with the walls of the air gap and not toward or away from them, the whole action of the dynamic speaker insures faithful reproduction.

Moreover, in the dynamic type of speaker a very strong magnetic field is used, and since the motion of the voice coil is parallel to the pole faces, a large amplitude of motion may be obtained. These features

*An explanation of the term "straight line function" as used above means that the force acting on the driving agent increases or decreases directly as the voice current increases or decreases.

have made the moving coil or dynamic speaker ideally suited for all forms of reproduction, whether it be for public address work, where great volume is needed or for the radio receiving sets or electrical phonograph where faithful reproduction is the prime requisite.

The evidence abundantly shows that the dynamic type of loud speaker has practically entirely supplanted the so-called "magnetic" or iron armature type, for loud speaking purposes, and that prior to Pridham and Jensen's inventions there was not on the market nor available to the public, any kind of a dynamic loud speaker.

**PRACTICAL ART PRIOR TO PRIDHAM AND JENSEN'S
INVENTIONS.**

Mr. Pridham, one of the patentees, has been engaged in telephone and wireless work for many years. Concerning his experience he testified:

"I have been connected with the art of communication, especially electrical communication, for 35 years, being employed by the Western Electric, the Chicago Telephone Company, and other telephone companies. I am a graduate of Stanford University, Department of Physics, 1909. I was employed by the Poulsen Wireless Telegraph Company in 1910, where I met Mr. Jensen, who is co-inventor with me in these patents. We were sent to Europe to study the wireless companies and the methods of operation in 1910. In 1911 there was formed the Commercial Wireless & Development Company by

some San Francisco men, among whom were Mr. Richard O'Connor, Matt I. Sullivan, and others. We established a laboratory in Napa in 1911 for the purpose of undertaking a study of the reproduction of radio impulses and general problems in communication. While there we made a very interesting discovery of the effect of telephonic currents on a conductor when disposed in a magnetic field." (R. 252-3.)

That was the beginning of their experiments in dynamic or moving coil loud speakers which they carried on earnestly for eight or ten years before arriving at a construction deemed by them and the public to be commercially practical or useful in the hands of the public.

Concerning what was available to the public in the way of a loud speaker at the time Pridham and Jensen entered the field, Mr. Pridham testified:

"There were in use at the time we were working on these loudspeakers various types of magnetically-operated loudspeakers which consisted of a magnetically-operated armature which was attracted to the poles which were part of a magnetic structure. The telephone current went around these energizing poles of the magnetic structure, and attracted the iron armature to the pole pieces. That was generally known as a magnetic type of armature. There were several of those on the market. I have seen a number of them in operation.

Q. Were they or were they not satisfactory?

A. I think they were not satisfactory. That is my personal opinion as a person well versed in that art. They would reproduce sound. They

were never used with any great commercial success that I know of. I saw installations in the White Sox Ball Park in Chicago. I saw installations of these particular instruments in the Morrison Hotel. They never did supply what I thought, and what a great many other people, I imagine, thought was a commercially successful loud speaker.

Q. To what extent, if you know, are such magnetically-operated annunciators or loudspeakers used at the present time?

A. I would say from a percentage standpoint that they are practically obsolete. I do not believe there is one-tenth of one per cent. of the loud speakers on the market today operated by a magnetic armature." (R. 344-5.)

Mr. Metcalf, a witness on behalf of plaintiff, testified at page 390 that he first became interested in radio in 1908. He received his radio operator's license in 1912. His qualifications include post-graduate work at the University of Illinois and the University of Minnesota. He has been an instructor at North Dakota Agricultural College and an instructor in the Air Service School for Radio Officers, at Columbia University, and was also a radio officer at Bolling Field, in charge of radio development work in the United States Air Service, during the late war. As to when a dynamic speaker of any sort first came to his attention, he testified:

"When I was at Bolling Field, any equipment which had to do with radio that had been brought to the attention of the air service was brought to Bolling Field to my laboratory for test. Mr. Pridham, and I think Mr. Steers, who at that

time was president of the Magnavox Company, brought out to the field a number of dynamic speakers and a two-stage amplifier. We set up these speakers on Bolling Field and made a number of tests where some of our men walked over the field to a distance of two and three miles listening to music and speech as it came from the speakers. On the basis of that demonstration I recommended that these speakers be used in the opening, I believe, of the Fifth Victory Loan which took place—Let me refer to my note-book here—April 21, I believe.

Q. What year?

A. April 21, 1919. In that demonstration a radio receiving set was installed on the steps of the Treasury Building and connected to a battery of speakers, at least with several Magnavox speakers, and after the set up had been made I was taken back to Bolling Field by a Government automobile, got in a plane which was equipped with a radio transmitting set, and flew over the Treasury Building at a height of approximately 2600 feet and read into the microphone of the radio telephone the President's cable which had not been released to the press or the public until that reading. That was caught on the Treasury steps by the receiving set and reproduced to the large assembled crowd as I was reading it. To the best of my knowledge the air service, or airplanes had not engaged in such communication before that time." (R. 392-3.)

Mr. Metcalf, speaking of a time prior to his work at Bolling Field, testified:

“A. I had a problem on my hands at Columbia University as instructor in the air service school

there, of instructing a large number of students in code reception. I built a receiving set which we were allowed to have at that time, tuned to German and French stations. We received those in the office. I tried through the director of air service and through the agencies that I could, to get hold of a loudspeaker. I finally succeeded in getting an annunciator, a horn type speaker which was made by the Western Electric Company; it was the best, and as far as I could find out, the only thing available at that time. It was a magnetic type of speaker, and if we tried to crowd it, to put any amount of energy in it, to make it talk up loudly, it would rattle, the armature would hit the pole piece, and it was not satisfactory and we did not meet with any satisfactory loud speaker until we found a Magnavox dynamic at Bolling Field in 1919." (R. 399-400.)

Mr. Linden, Supervisor of Radio, Sixth Radio District, Department of Commerce, whose practical experience in radio is lengthy and goes back to 1906 or 1907, testified:

"I cannot answer as to the exact date the first loudspeaker of a moving coil type came to my notice, but it was considerably before the year 1921. Pardon me, I would not say 'considerably' in years, but some time before 1921. It was called a Magnavox loudspeaker of the dynamic type. At this time, when I first learned of the Magnavox dynamic speaker, there were no other loud speakers on the market that I knew of manufactured as such.

There was a need in the trade for a loudspeaker prior to the time when I first learned of the Magnavox." (R. 414.)

Mr. Warner, now engaged in the retail radio business, testified at page 419 that he had been connected with radio, first as an amateur, as far back as 1909 or 1910, and that:

“The first commercial loud speaker of a moving coil type to come to my attention was the ‘Magnavox.’ It was also the first one that I had any connection with in retail sales or uses. I first heard of the Magnavox loudspeaker about 1920; that is, the R-2 and the R-3, I believe, if the numbers are right.

Prior to that time there was need for a loudspeaker. We would have liked to have had at that time something to make something audible to crowds.” (R. 419.)

Mr. Zemansky, at present in charge of the Radio Department of the White House, San Francisco, testified that since 1913 he had been engaged in the radio and electrical business. Referring to the situation prior to 1919, he stated that as far back as 1912, Station KDN was broadcasting election returns, and:

“I can remember the folks calling in the neighbors to hear this. We would pass the earphones from one to the other. At that time we could have used a loudspeaker very nicely.

Q. To your knowledge was there any loudspeaker made commercially and sold prior to the time you first learned of the Magnavox?

A. There was a form of speaker that we made up, ourselves, which was sold. It was more or less of a magnetic earphone with a paper cone on it. You could set up any kind of earphones. Then there was the Baldwin. That was the only type of speaker we knew of at that time.” (R. 424.)

The Baldwin was an earphone of the magnetic type.

Mr. Eiferle, who is engaged in the radio business, testified that his experience with radio goes back to 1908; that he installed Magnavox loud speakers in the Oakland Auditorium in 1920, and that:

“At that time there were no other loudspeakers being made commercially or being sold on the market. In fact, before I even was in the sale of radios there was a big demand for speakers. There were none on the market, at all, with the exception of the earphone type. The earphone type was not satisfactory, because it was not audible enough.” (R. 426.)

Prior to Pridham and Jensen, sporadic attempts were made to solve the problem, but these attempts never went beyond the paper stage with the possible exception of those of Dr. Lodge, of England. His attempts started in 1898 and ended with a crude laboratory model, wherein a large panel or the wall of a room was intended to form a part of his idea of a loud speaker, and to operate it required the constant attendance of an expert. These prior efforts ended in failure because others did not know how to solve the problem which was for the first time solved through the practical ingenuity and perseverance of Pridham and Jensen after years of thought, experimentation, and hard work, and at great expense and sacrifice to themselves and their families.

Marconi did no more for radio or wireless transmission and reception than did Pridham and Jensen for loud speakers. So much is clear from a reading of the Court's opinion in *Marconi Wireless Tel. Co.*

v. DeForest Wireless Tel. Co., 138 Fed. 657, wherein one of Marconi's early patents was sustained. In the course of the Court's opinion it was pointed out that:

“If now we examine the patent in suit in the light of this discussion, we shall find that every element of the claims in suit is taken from the prior art.” (R. 671.)

The actual achievement of Marconi appears to be summed up in the following statement by the Court:

“No prior existing system was complete, or had been shown or conceived to be commercially operative.” (R. 672.)

The same consideration would apply to the Pridham and Jensen patents.

This Court, in *Butler v. Burch Plow Co.*, 23 Fed. (2d) 15, quoted with approval and applied the principle laid down in the case of *O'Rourke Engineering Const. Co. v. McMullen*, 160 Fed. 933, C. C. A. 2nd Circuit, as follows:

“‘Has the patentee added anything of value to the sum of human knowledge? Has he made the world's work easier, cheaper and safer? Would the return to the prior art be a retrogression? When the court has answered this question, or these questions, in the affirmative, the effort should be to give the inventor the just reward of the contribution he has made. The effort should increase in proportion as the contribution is valuable.

‘Where the court has to deal with a device which has achieved undisputed success and accomplishes a result never attained before, which

is new, useful and in large demand, it is generally safe to conclude that the man who made it is an inventor. The court may resort to strict, and it may even be to harsh, construction, when the patentee has done nothing more than make a trivial improvement upon a well known structure which produces no new result; but *it should be correspondingly liberal when convinced that the patentee's improvement is so radical as to put the old methods out of action.* The courts have frequently held that one who takes an old machine, and by a few even inconsequential changes compels it to perform a new function, and do important work which no one before ever dreamed it capable of performing, is entitled to rank as an inventor.' O'Rourke Engineering Const. Co. v. McMullen (C. C. A. 2d) 160 F. 933, 938.

'The keynote of all the decisions is the extent of the benefit conferred upon mankind. Where the court has determined that this benefit is valuable and extensive, it will, we think, be difficult to find a well-considered case where the patent has been overthrown on the ground of nonpatentability.' O'Rourke v. McMullen, *supra*." (Page 24.)

**ESSENTIAL REQUIREMENTS FOR A SUCCESSFUL
LOUD SPEAKER.**

The essential requirements for a commercially operative loud speaker are as set forth by Mr. Pridham at R. 271 and Mr. Metcalf at pages 394, et seq.

From the testimony of these experienced men it is clear that in order to produce a practical and efficient

loud speaker suitable for commercial manufacture, sale, and use, there must be provided the following:

(1) A peripherally supported diaphragm capable of a comparatively wide range or amplitude of movement with an annular moving coil *rigidly* connected to the center thereof for driving the diaphragm.

(2) This coil must be disposed between inner and outer magnetic pole pieces in a *very, narrow* annular air gap formed between the two pole pieces. The narrower the gap the stronger the magnetic field, thus insuring the large movement of the moving coil necessary for a loud speaker.

(3) Since the moving coil when positioned in this *very narrow air gap* has but a *very slight clearance*, the pole pieces must be so spaced and maintained at all times as to prevent all likelihood of the rapidly moving driving coil rubbing against the pole pieces or being crushed, such as would occur if the pole pieces should change their relative positions.

(4) The diaphragm housing must be *connected directly with and supported on the magnetizing structure* and the parts secured together in a manner to properly position and at all times maintain the rapidly vibrating driving coil in the very narrow air gap between the two pole pieces.

(5) The whole structure must be arranged and combined in a unitary, self-contained, compact form so as to withstand the various strains imposed thereon in handling, shipping, transporting and using, and adapt it for use in the home.

In and by the second patent in suit, Pridham and Jensen were the first to accomplish all of these desiderata. The same are found to exist in like or equivalent form in the devices here charged to infringe.

While not essential in all cases, the feature of extending the lead-out wires from the voice coil along the surface of the diaphragm, is an extremely desirable provision, since it eliminates danger of breakage of the fine wires as set forth in the first patent in suit. In the devices charged to infringe, these lead-out wires are carried from the voice coil along the surface of the conical diaphragm to a point intermediate the apex and the base thereof, for the purpose of preventing breakage.

INFRINGEMENT.

At page 382 of the Book of Exhibits is a cross-sectional drawing of the Atwater Kent Loud Speaker charged to infringe in the Ingold case. This is Plaintiff's Exhibit 1. Plaintiff's Exhibit 2 is a similar drawing of the Stromberg-Carlson Loud Speaker charged to infringe in the Stromberg-Carlson and Garnett Young case. Through oversight, this Exhibit 2 does not appear in the Book of Exhibits, but a copy thereof is inserted at the end of this brief. There is no important difference between the two devices, and for the purposes of this case they may be considered as one and the same.

A sectional drawing of a Magnavox Loud Speaker as commercially manufactured at the time of the

trial and prior to the infringement complained of, appears at page 386, Book of Exhibits. The actual physical devices are in evidence as follows:

- Stromberg-Carlson Device, Plaintiff's Exhibit 3;
- Atwater Kent Device, Plaintiff's Exhibit 4;

A Magnavox Speaker in the form being offered to the trade prior to the infringement herein complained of, is Plaintiff's Exhibit 20. These physical exhibits are before the Court for inspection.

Mr. Pridham, in his testimony at pages 86 to 89, applied the claims in suit to defendants' structures by reference to the drawings, Exhibits 1 and 2. Like letters of reference appear on these drawings. The manner in which Claim 8 of the first patent applies to both drawings is as follows:

Claim 8 of Patent 1,266,988: In a receiver for telephony the combination with

- (1) a sound box H and its diaphragm G , of
- (2) a magnetic field (formed by outer pole piece A^1 and inner pole piece F)
- (3) a vibrating conducting coil J for the telephonic currents, disposed in said field and rigidly secured to the diaphragm,
- (4) and connections K and K^1 between the said coil and the operating circuit, comprising thin metallic strips K secured to the diaphragm (as indicated at M).

Claim 8 of Patent 1,448,279 applies to the drawings of both structures in the following manner:

An electrodynamic receiver comprising

(1) a shell or casing *A* having bottom and side walls formed of magnetizable material,

(2) a magnetizing coil *C* within said casing,

(3) a core *D* for the coil and extending from the bottom *A*² of the casing to the top thereof, formed at its upper end *F* with an inner pole piece,

(4) an outer pole piece *A*¹ in the form of a flat plate arranged upon the casing, having a central opening surrounding the inner pole piece and spaced evenly therefrom,

(5) means *E* within the casing for retaining said pole pieces in spaced relation,

(6) a sound-box *H* carried by the casing, said sound-box including a diaphragm *G*,

(7) and a movable coil *J* rigidly connected to the diaphragm and arranged within the space between the two pole pieces.

It is apparent that the District Court's finding of non-infringement is not based upon the omission by defendants of any one or more elements of the patented combinations. The reason back of the finding must have been that defendants had changed the form of certain elements. In defendants' devices the combination still remains intact and operates in the same manner to produce the same results as in plaintiff's patents. The correct rule of law for determining infringement in a case of this sort is set forth in *Machine Company v. Murphy*, 97 U. S. 120,

where the Court, in reversing a decree of dismissal based on non-infringement, said:

“Except where form is of the essence of the invention, it has but little weight in the decision of such an issue, the correct rule being that, in determining the question of infringement, the court or jury, as the case may be, are not to judge about similarities or differences by the names of things, but are to look at the machines or their several devices or elements in the light of what they do, or what office or function they perform, and how they perform it, and to find that one thing is substantially the same as another, if it performs substantially the same function in substantially the same way to obtain the same result, always bearing in mind that devices in a patented machine are different in the sense of the patent law when they perform different functions or in a different way, or produce a substantially different result.

Nor is it safe to give much heed to the fact that the corresponding device in two machines organized to accomplish the same result is different in shape or form the one from the other, as it is necessary in every such investigation to look at the mode of operation or the way the device works, and at the result, as well as at the means by which the result is attained.”
(Page 125.)

DEFENDANTS' CONTENTIONS.

The contentions made in the Trial Court by defendants were:

(1) No infringement; based on the theory that defendants' cone housing was not the equiva-

lent of the element referred to in the claims as a "sound box". It was also argued that defendants' lead-out wires attached to the conical diaphragm were not the equivalent of the thin metallic strips specified in Claim 8 of the first patent in suit.

(2) Want of invention in view of the prior art, the principal references relied upon being the Lodge British patent and publications concerning his syntonic receiver.

RE KELLOGG PATENT 1,707,617.

It was contended by defendants at the trial that Kellogg Patent 1,707,617 (Book of Exhibits p. 249) applied for January 9, 1925 and issued April 2, 1929, was material herein to show (1) that a cone and cone-housing were not the equivalent of a sound box and diaphragm; and (2) that it raised a presumption of non-infringement in favor of defendants.

The evidence does not show that defendants have any interest in or rights under this Kellogg patent. On its face it appears to be owned by the General Electric Company.

Obviously the issuance of this patent does not fulfill the purpose which defendants contend for. At most it merely raises a presumption that Kellogg made some change or improvement over the patents in suit which the Patent Examiner regarded as patentable. It is well settled in this Court that a defense of non-infringement by virtue of a later patent is without merit. (*Bake-Rite v. Tomlinson*,

16 Fed. (2d) 556; *Dinuba Steel Products Corp. v. Killefer*, 56 Fed. (2d) 848. See also, *Walker on Patents*, 6th Edition, page 512.)

The Court of Appeals, Sixth Circuit, in the case of *Herman v. Youngstown Car Mfg. Co.*, 191 Fed. 579, gave the reasons why a later patent raised no presumption of non-infringement:

“There are expressions in some reported cases implying that by the later patent the government has granted a right to make and use the article so patented, and that such grant is inconsistent with any construction of the earlier patent which would forbid the manufacture of the later structure. *Such implication rests on a fundamental error.* A patent is not the grant of a right to make or use or sell. It does not, directly or indirectly, imply any such right. It grants only the right to exclude others. The supposition that a right to make is created by the patent grant is obviously inconsistent with the established distinctions between generic and specific patents, and with the well-known fact that a very considerable portion of the patents granted are in a field covered by a former relatively generic or basic patent, are tributary to such earlier patent, and cannot be practiced unless by license thereunder.”

RE GREAVES v. KELLOGG INTERFERENCE.

Defendants introduced in evidence the record of an interference entitled “*Greaves v. Kellogg*” (Def’s. Exhibit GG, pages 499 et seq., Book of Exhibits), to which plaintiff objected on the ground of immateriality and the fact that the transactions there

occurred long after the issuance of the patents in suit. (Objections overruled and exception noted, R. 251.)

It appears therefrom that one Greaves filed an application for patent, the exact nature of which is not shown; that this application was placed in an interference with the Kellogg patent above mentioned; that the interference was terminated on motion because the subject-matter in dispute appeared in a printed publication more than two years before Greaves filed. Greaves had assigned whatever rights he might have had to a patent, to plaintiff Magnavox Company, and it was contended by defendants at the trial that the situation created an estoppel against plaintiff to contend in this suit that a cone and cone-housing were the equivalent of a sound box and diaphragm. The argument is exceedingly tenuous and far-fetched, and no authority is cited in support thereof.

A complete answer appears to be that defendants were entire strangers to this transaction, and the infringing acts were not influenced by anything occurring in said interference. The acts herein complained of occurred prior to April 16, 1930 (that being the date of filing of the Bills of Complaint), whereas the interference proceedings on which defendants rely occurred between the dates of May 21, 1930 and January 27, 1931.

Just how anything of this nature could be fitted to the definition of an estoppel, is beyond comprehension. Moreover, no defense of this nature was set up in the answers. The Trial Court should have sustained plaintiff's objection.

The very point urged by defendants with respect to estoppel has been decided adversely to their contention in the case of *Temco Co. v. Apco Co.*, 275 U. S. 319, in an opinion by the late Chief Justice Taft. There the patentee of the patent in suit applied for a patent on an improvement. His application was placed in interference with another party and the other party was declared by the Patent Office to be the first inventor of the improvement. The defendant claimed to be operating under this improver's patent and urged it as a defense. The decision of the Supreme Court is sufficiently shown in the following, quoted from the syllabi:

“4. An improver who appropriates, without license, the basic patent of another, is an infringer and suable as such.

5. Patentee who applied for a second patent as an improvement ‘over’ the first, characterizing the new device as different in mechanical construction and functional results, *held* not estopped to insist on the old invention as against one who secured patent to the improvement through interference proceedings.” (Page 320.)

RE SOUND BOX.

The testimony shows that a diaphragm without some sort of support, whether we call it a sound box or a cone housing, is incapable of reproducing sounds in the manner required in a loud speaker, the reason therefor being that a diaphragm or cone unsupported or unrestrained at its periphery, sets up a blasting

and fluttering action which destroys the value of the tones given off thereby.

“Sound box” does not mean something that requires the use of a horn. There are many varieties of shapes and forms of sound boxes shown in the art prior to the date of the Pridham and Jensen patents in suit, as seen, for example, in a group of patents offered in evidence as Plaintiff’s Exhibit 18, which appear in the Book of Exhibits at pages 23 to 107. In none of these is any horn employed—other than what might be called a “directional baffle”.

These early patents include Maxwell 216,051, Dann and Lapp 338,660, Lumiere 1,036,529, and several others.

Mr. Pridham, in explaining his understanding of the significance of the term “sound box” in the art, testified:

“A. A soundbox, as known in the art from almost the very beginning, has always seemed to me to mean the enclosure of the diaphragm or the supporting means for the diaphragm. Now, referring to this chart which the draftsman made from pencil sketches which I made, we see the patent to Lumiere, No. 1,036,529. (P. 71, Book of Exhibits.) That represents Lumiere’s soundbox. It consists of peripherally mounted conical diaphragms; the horn is a short, trumpet-like form, which Lumiere states in his specification may be used or not. The diaphragm is very flexibly supported at its periphery. I have here a physical embodiment of the type of soundbox and diaphragm illustrated in the Lumiere patent. (Pliff’s. Ex. 11.) I purchased it in Los Angeles.

It was on the market for many years.* The sound-box in this device is represented by the supporting rings of the diaphragm. This is the diaphragm which Lumiere has patented in his patent. These rings are supported on the frame of this device. That was quite a successful loudspeaker. I might say that the Victor Phonograph Company sold many thousands of speakers using this type of soundbox in connection with the magnetic drive. This particular one had a dynamic drive.* I have operated that speaker in the laboratory and it operated very well.” (R. 273-274.)

This Lumiere Patent 1,036,529, which was filed in 1910 and issued in 1912, states on page 1, line 30:

“My invention also relates to the *sound box* in which said diaphragm is mounted.”

The sound box is described as consisting of clamping rings 9 and 10, and a backing ring 12 with radial arms 13. The trumpet 11 may or may not be used. Claims 5 and 27 to 30 of this Lumiere patent all refer to this holding structure for the diaphragm as a “sound box”. This terminology was accepted by the experts in the United States Patent Office in allowing the Lumiere patent. Therefore no reason is seen why Pridham and Jensen’s claims in referring to a sound box should not be construed as intended to embrace such a sound box as Lumiere illustrates and which defendants use in identical form, from an acoustical standpoint.

There is a chart (Plff’s. Exhibit 12) reproduced in the Book of Exhibits, page 384, which serves to

*Subsequent to the filing dates of the patents in suit. (R. 363.)

show the similarity in principle and mode of operation between the diaphragm and its mounting, as specifically illustrated in plaintiff's patents, and the cone and cone-housing used by defendants. In explaining this chart Mr. Pridham testified:

"Continuing with my explanation of the chart, the next figure represents a diagrammatic drawing of the Magnavox soundbox, which shows the peculiarly-corrugated diaphragm 2 supported at its edges 3; the ferrule of the horn is shown at 1. When larger diaphragms are used we have found that it is not necessary to use a horn. A term has come into use, which is known as a 'baffle'; that baffle is simply a short horn, something like Lumiere shows in Fig. 1. We have shown in the lower lefthand figure what is known as a directional baffle. It is really a short horn with a very wide mouth. The mouth fits the diameter of the diaphragm. This particular type at the present time is sold and is being used for advertising purposes on trucks. Almost any day you can go down on Market Street and see one of those devices mounted on a truck going down the street. When you don't care for a directional horn and wish to have the sound propagated over a wider area, you use a wide baffle with the soundbox and diaphragm as illustrated in the lower righthand drawing." (R. 274.)

A baffle is used in connection with all radio loud speakers of the cone type, especially those of the size which we are here concerned with. This baffle consists of the cabinet in which the speaker is enclosed. If the speaker be removed from its cabinet a relatively weak and high-pitched tone is reproduced. Mr.

Metcalf (R. 402-403) gives an explanation of the function of the baffle, comparing its operation to that of a horn or trumpet.

In comparing the operation of a small diaphragm-and-horn combination with the larger conical-diaphragm-and-baffle combination, Mr. Metcalf testified:

“A. From actual performance point of view, for the finest and most faithful sound reproduction, there is no doubt whatsoever in my mind that the horn type of speaker is probably the best. My reasons for saying that are simply, from an examination of the industry which has developed in Hollywood for the recording and reproduction of talking motion pictures, while it is true that the General Electric Company has supported the cone diaphragm type or baffle type of speaker the Western Electric Company has supported the horn type speaker. Many of the present day dynamic speakers as made by the Western Electric Company, are used with a horn having conical diaphragms in them. The conical diaphragm is old, and has been well exemplified by Mr. Brown in some of the early receivers.” (R. 400-401.)

As to whether or not the cone housing functions as does the so-called sound box, in a combination of the sort we are here considering, Mr. Metcalf referred to a book by the eminent authority, Mr. Dayton C. Miller, published in 1916, a page of which book is reproduced in the Book of Exhibits at page 383. Mr. Metcalf said:

“A. Dayton C. Miller calls it a diaphragm, and a diaphragm housing. Now it seems quite sig-

nificant to me that the word 'housing' was used by Dayton C. Miller away back in 1916. He called it a diaphragm housing; with these cones they call them cone housings. The diaphragm in its housing was what we knew in 1920, 1921, 1922, 1923, along in there, as a sound-box, and Dayton C. Miller, in his designs, showed them with the front wide open, with the back wide open, and we knew at the time that the sound-box could be made open, closed, or any old way. I simply took it for granted that in any sound-box the diaphragm naturally was supported at its edges; I have not known of any sound-box, which I would call a sound-box, where the diaphragms were not supported at their edges, and consequently I took it purely for granted and did not so state.

Q. The importance of that support at the edge of the periphery is what?

A. It is very important because of the phenomenon which is known as blasting, and which causes certain areas of the diaphragm to flutter. (I call it flutter, I do not like to call it vibrate, because they do not go through any regular motion.) I think a good example of blasting or fluttering is such as when you take a piece of paper by its edges and shake it. There are nodes gathered at points and these cause a tremendous fluttering, and that fluttering can be heard; if you leave any of the edges exposed, that particular part of the edge will do that." (R. 404-405.)

It is appellant's contention that the facts in this case require the application of the rule laid down in

Imhaeuser v. Buerk, 101 U. S. 647, to the effect that where the patented invention consists of a combination of old elements, it is entitled to cover equivalents for those elements in the same combination; by which is meant any element, even though different in form, which was known to be a proper substitute for the one described in the specification. This rule has been applied in a number of cases in this Court, even where the substituted element effected an improvement in the combination. See

Smith Cannery Machines Co. v. Seattle-Astoria Iron Works, 261 Fed. 85;

Detroit Copper Mining Company v. Mine & Smelter Co., 215 Fed. 100;

Pedersen v. Dundon, 220 Fed. 309;

Williams v. Kaufman, 259 Fed. 859;

Petroleum Rectifying Co. v. Reward Oil Co.,
260 Fed. 177.

The rule is also stated in *Winans v. Denmead*, 56 U. S. 330, as follows:

“Where form and substance are inseparable, it is enough to look at the form only. Where they are separable; where the whole substance of the invention may be copied in a different form, it is the duty of courts and juries to look through the form for the substance of the invention—for that which entitled the inventor to his patent, and which the patent was designed to secure; where that is found, there is an infringement; and it is not a defence, that it is embodied in a form not described, and in terms claimed by the patentee.” (Page 343.)

Conical diaphragms of the form used by defendant, mounted in what is now called a "cone housing," were known in the art long prior to Pridham and Jensen's time. A good instance is Hopkins Patent 1,271,529, appearing in the Book of Exhibits, page 113. That is one of the patents involved in *Lekto-phone v. Rola*, 34 Fed. (2d) 764, wherein this Court held that even prior to Hopkins' time, which was 1913, conical diaphragms mounted in a suitable housing or support, were known in the art, referring to Maxwell, Dann and Lapp, and others.

Certainly, therefore, since the time of Hopkins, if not prior thereto, cones and cone housings have been known to be the equivalent for so-called sound-boxes and diaphragms, and one could be substituted for the other in any sound reproducing instrument. Therefore, the defendant in changing the type of diaphragm and mounting was simply doing what any person skilled in the art would be able to do at the time Pridham and Jensen made their invention.

The conical diaphragm such as defendants use, which conical diaphragm is supported peripherally in a housing and that housing in turn is secured to the removable plate of the pot-like structure, constitutes a known equivalent for "a sound-box carried by the casing, said sound-box including a diaphragm." The important thing is that in either case a rigid housing or frame supports the diaphragm at its periphery so as to permit it to operate in the most efficient manner, and this housing or frame is in turn secured to the magnetizing structure so that the diaphragm

and its driving coil are at all times held in proper working relation with the narrow air gap.

It is important to note that the claims in suit are broad enough to embrace all forms of so-called sound-boxes, whether they be used in connection with a horn or be of a form not requiring a horn. The drawings do not show a horn, although they illustrate a type of sound box which was obviously intended for use with a horn. However, nothing is said in the specifications or the claims which restricts Pridham and Jensen's invention to such a type of sound-box as could be used only in combination with a horn. As stated in *Walker on Patents*, 6th Edition, page 501:

“The doctrine of equivalents may be invoked by any patentee, whether he claimed equivalents in his claim, or described any in his specification, or omitted to do either or both of those things. The patentee, having described his invention and shown its principles, and claimed it in that form which most perfectly embodies it, is, in contemplation of law, deemed to claim every form in which his invention may be copied, unless he manifests an intention to disclaim some of these forms. Combination patents would generally be valueless in the absence of a right to equivalents, for few combinations now exist, or can hereafter be made, which do not contain at least one element, an efficient substitute for which could readily be suggested by any person skilled in the particular art.”

The contention has also been made by defendants that Patent 1,448,279 should be restricted to a center pole piece, the tip of which is detachable. The answer

to this is that the detachable pole tip is expressly covered by claims other than Claim 8, and to read this into Claim 8 would be to make the claims all alike, which is contrary to the rules for interpretation of patent claims. A construction which would make two verbally different claims in a patent identical, is not to be followed, where there is nothing in the prior art which constrains to any such construction. (*Automatic Recording Safe Co. v. Burns Co.*, 231 Fed. 985, C. C. A. 2nd Circuit.)

Moreover, it was held by this Court in *Pedersen v. Dundon*, 220 Fed. 309:

“Neither the joinder of two elements of a patented combination into one integral part, accomplishing the purpose of both, nor the separation of one integral part into two, which together accomplish substantially what was done by the single element, will avoid a charge of infringement.”

The contention is also made by defendants that because plaintiff's Patent 1,266,988 illustrates and describes flat metallic strips 27 secured to the diaphragm, whereas defendant's metallic strips secured to the diaphragm are round, there can be no infringement. It is to be noted, however, that Claim 8 of this patent does not call for “flat metallic strips”, but rather, “thin” metallic strips. Certainly it can not be successfully contended that the very fine wires used in defendant's devices are not “thin”. Obviously, within the authorities above mentioned, to substitute thin round strips for thin flat strips in a particular combination, does not avoid infringement.

The Court of Appeals, 4th Circuit, in *Crown Cork & Seal Co. v. Aluminum Stopper Co.*, 108 Fed. 845, gives an instructive review of the Supreme Court decisions on the question of infringement, as follows:

“The court will look through the disguises, however ingenious, to see whether the inventive idea of the original patentee has been appropriated, and whether the defendants’ device contains the material features of the patent in suit, and will declare infringement even when those features have been supplemented and modified to such an extent that the defendant may be entitled to a patent for the improvement. *Clough v. Mfg. Co.*, 106 U. S. 164, 1 Sup. Ct. 188, 27 L. Ed. 134, and *Clough v. Mfg. Co.*, 106 U. S. 178, 1 Sup. Ct. 198, 27 L. Ed. 138, illustrate such a case, where certain elements in a valve were held in one case to be equivalents of those in a former patent, and to infringe, yet were so modified and improved as to sustain a later patent. In *Consolidated Valve Co. v. Crosby Valve Co.*, 113 U. S. 157, 5 Sup. Ct. 513, 28 L. Ed. 939, the improvements covered by the patents had been held by the court below to involve only mechanical modifications of the prior art, yet the supreme court regarded the Richardson invention as a ‘pioneer invention,’ and, although the defendant’s valves departed widely from the terms of the claims in suit, it was held that they had secured under a change in form, and by the transposition from one member to another of certain functions, the substance of the complainant’s invention, and the claim was construed to cover these modifications. Says the court (p. 171, 113 U. S., p. 521, 5 Sup. Ct. and p. 943, 28 L. Ed.):

‘Taught by Richardson and by the use of his apparatus, it is not difficult for skilled mechanics to take the prior structures, and so arrange and use them as to produce more or less of the beneficial results first made known by Richardson; but prior to 1866, though these old patents and their descriptions were accessible, no valve was made producing any such results.’ ” (Pages 866-7.)

Describing the Richardson invention and comparing it with the defendants’ device, the Court goes on to say:

“Richardson’s invention was a safety valve, which, while it automatically relieved the pressure of steam in the boiler, did not, in effecting that result, reduce the pressure to such an extent as to make the relieving apparatus practically impossible because of the expenditure of time and fuel necessary to bring up the steam again to the proper working standard. His valve was the first which had a strictured orifice leading from the huddling chamber to the open air to retard the escape of steam, enabling the valve to open and to close suddenly with small loss of pressure in the boiler. In the infringing patent the valve proper was an annulus, and the extended surface was a disk. In Richardson’s the valve proper was a disk, and the extended surface an annulus surrounding the disk. The defendant’s had two ground joints, and only the steam which passed through one of them passed through the stricture, while in Richardson’s all the steam which passed into the air passed through the stricture. The court says (p. 179, 113 U. S., p. 525, 5 Sup. Ct. and p. 946, 28 L. Ed.):

‘When the ideas necessary to success are made known, and a structure embodying those ideas is given to the world, it is easy for the skillful mechanic to vary the form by mechanism which is equivalent, and is therefore, in a case of this kind, an infringement.’

These conclusions were based on the fact that no prior structure had produced the same result as Richardson’s, although the court, of course, did not mean that Richardson had produced the first valve.” (Page 867.)

The Court then analyzes the case of *Machine Company v. Lancaster*, 129 U. S. 263, as follows:

“*Machine Co. v. Lancaster*, 129 U. S. 263, 9 Sup. Ct. 299, 32 L. Ed. 715, was for infringement of a patent for sewing on buttons. This was not the first button-sewing machine, but the court described it as a ‘pioneer machine,’ and held that it was infringed by a machine that made use of elements which were individually considered quite different from those in the patent, saying (p. 290, 129 U. S., p. 308, 9 Sup. Ct., and p. 725, 32 L. Ed.):

‘The mechanical devices used by the defendants are known substitutes or equivalents for those employed in the Morley machine to effect the same results. And this is the proper meaning of the term ‘known equivalent’, in reference to a pioneer machine such as that of Morley; otherwise, a difference in the particular devices used to accomplish a particular result in such a machine would always enable a defendant to escape the charge of infringement, provided such devices were new with the defendant in such a machine, because, as no machine for accomplish-

ing the result existed before that of the plaintiff, the particular device alleged to avoid infringement could not have existed or been known as such a machine prior to the plaintiff's invention.' ” (Page 867.)

**MERIT AND IMPORTANCE OF THE INVENTIONS
OF PLAINTIFF'S PATENTS.**

As said by the late Chief Justice Taft in the case of *Eibel v. Paper Co.*, 261 U. S. 45:

“In administering the patent law the court first looks into the art to find what the real merit of the alleged discovery or invention is and whether it has advanced the art substantially. If it has done so, then the court is liberal in its construction of the patent to secure to the inventor the reward he deserves. If what he has done works only a slight step forward and that which he says is a discovery is on the border line between mere mechanical change and real invention, then his patent, if sustained, will be given a narrow scope and infringement will be found only in approximate copies of the new device. It is this differing attitude of the courts toward genuine discoveries and slight improvements that reconciles the sometimes apparently conflicting instances of construing specifications and the finding of equivalents in alleged infringements.” (Page 63.)

And the Court adds:

“But a patent which is only an improvement on an old machine may be very meritorious and entitled to liberal treatment.”

We have already adverted to the fact that there was nothing in the prior practical art in the way of a dynamic loud speaker capable of functioning in the hands of the public. It was the contention of defendants that Lodge disclosed everything of importance to be found in plaintiff's patents, and that what he omitted could be supplied by any mechanic without the exercise of invention. However, the evidence shows that the Lodge experiments never progressed beyond the laboratory stage and that Pridham and Jensen, two skilled engineers, devoted many years of intensive study and experiment to the problem before they arrived at a combination which might be said to be successful, practical, and commercial.

Mr. Pridham gives a detailed account of the difficulties of the problem which confronted Pridham and Jensen from the outset of their efforts to produce a satisfactory dynamic loud speaker, and the repeated experiments which were necessary to perform before their efforts were crowned with success. At R. 253 to 259, Mr. Pridham relates:

“The problems that we had to attack were various, and were very difficult of solution. It took quite a bit of time; we had several mechanics; it took quite a bit of money. * * * One evening I called Mr. O'Connor up from the laboratory and told him we were four or five months behind in our bills, the mechanics had not been paid. * * * I told him then that we had just produced a very successful loudspeaker telephone. It rather interested him immediately to think we had produced something that would be commercially successful. He said that he would

send his son Charlie up to hear this instrument. When Charlie came up on the next Sunday we had this instrument arranged on the roof of the house, on the chimney. A very large horn was connected to the instrument. The voice was propelled through the air for a distance of four miles. At night in the Napa Valley records played on a phonograph could be heard throughout the Napa Valley, a distance of nine or ten miles. It created a very great sensation. Lieutenant-Commander Sweet, who had charge of radio work at Mare Island, came up to the laboratory and was much impressed with this loud-speaking telephone, because it was exceedingly loud. We were invited by the Exposition officials to give demonstrations at the Exposition from the Tower of Jewels. The reproduction from these instruments could be heard out on the battleships in the bay, and, in fact, the sailors even danced on the decks to the music. We gave a very important demonstration at the dedication of the City Hall in 1915. Mayor Rolph and other important men spoke to a crowd of over 50,000 people gathered there. Alice Gentle sang national airs over the instrument. There was a great deal of interest, both local and national. The Navy at that time was interested in docking vessels by means of our instruments. They ordered some instruments, and vessels were docked at the Bremerton Navy Yard very successfully. During all of these demonstrations we had one very great difficulty, the vibration of the coil in the magnetic field was very intense. That coil was wound with a fine wire in order to expose a great length of wire to the effect of the magnetic field. When these fine wires were brought directly out to the

operating circuit we had trouble with the wires crystallizing and breaking off. That was a very great and serious difficulty for us. We finally solved this difficulty by the ingenious method of connecting the operating circuit wires to the coil, where the coil wires were attached to the diaphragm. This completely obviated any danger of the breaking of the wires. This method and means has been used ever since in practically all dynamic speakers to date." (R. 253-255.)

Concerning the second patent in suit, Mr. Pridham testified:

"A. After giving these matters considerable thought and solving this problem of the breaking of the wires, we thought we had at last arrived at a very successful loudspeaker. This was in 1915 and 1916 that this particular action happened. However, we were very far from a successful instrument in the matter of shipping the instruments abroad, and having them handled by the public. We worked, you might say, day and night on this problem. The first flush of victory, you might say, was over. The people who were backing the company began to be a little tired of not having any commercial success. It spurred us on more and more to finally arrive at a successful instrument. I remember well at that time both Mr. Jensen and I were very hard-pressed. We simply had to have something to get a real commercial instrument that could be sold in quantities. It was a very difficult matter to find a solution for this. * * * At this time practically all work on telephone loudspeakers ceased and we were wholly engaged in developing what is known as the anti-noise transmitter for the

Government, which was very successful in aeroplane communication. I mention this simply to let you know the reason for a hiatus in our experiments in the loudspeaker. * * * In 1919 we again took up very active work in the development of this loudspeaker. At this time we developed the invention which is outlined in the second patent, which is No. 1,448,279. This patent was applied for April 28, 1920. For practically two years before that time, at least a year and a half, we were busy developing this new type of loudspeaker. We succeeded in developing a very efficient loudspeaker, which has stood the test of time. * * * It was known throughout the world as the Magnavox dynamic loudspeaker. It was shipped practically to the ends of the earth." (R. 257-259.)

Concerning the practical importance of the combination of Claim 8 of the first patent in suit, Mr. Metcalf testified:

"When this device was used as a loudspeaker, particularly when large amounts of power were put through it, the diaphragm moved over quite a wide range, and I have seen in the laboratory devices of this character in which the leads have been brought out in a number of different ways. I have seen the fine wire of the moving coil brought out directly. I have also seen the wires break under no more than a few seconds of operation under heavy signals, heavy input, and very often, most often, the fine wire of a moving coil was brought out to a point on the diaphragm and then it was soldered and attached to a strip or another wire, or anything which had more strength and was more flexible than the lead wire.

I have seen a number of different materials used for that purpose, not lately, but in the days when I first came with the company, from what I have been able to find out, such a device has become absolutely a necessity for dynamic speakers.” (R. 406-7.)

In referring to the second patent in suit, Mr. Metcalf pointed out those features of the Magnavox patented structure responsible for the success of the device and which are not to be found in the prior art, as follows:

“A. In the first place, the Magnavox speaker has good electrical efficiency. The air gap is small. The watt pounds of wire involved will be low because of the magnetic efficiency. The moving coil is set in there with a minimum of clearance. Now a minimum of clearance simply means that the air gap can be brought right up to the edges of the coil, the sides of the air gap can be brought up to the edges of the coil, and if there is not anything to *keep that coil from wobbling sideways*, it is impossible to keep the coil in such close relationship, and consequently it is necessary to keep three things in concentric relation, not only to put them there *but to keep them there*; the central pole piece B, the hole in the top plate A, and the moving coil must be made solidly, kept by some means or other from moving sideways; if you do that, then the air gap can be made very narrow and motion up and down to the extent of one sixteenth to one quarter of an inch can be had without danger of rubbing, and H spaces that pole, that center pole piece, and keeps it in concentric relation, and the solid relationship of the spider which fastens the moving coil on the

diaphragm, keeps the coil in the field at all times.* It has all forms of efficiency, it has acoustical efficiency, it has a diaphragm which is corrugated, which is free to move up and down. As I remember it, the Magnavox metal diaphragms, such as have been shown in evidence here, were several thousandths thinner at their edges than they were in the center, to free up the motion. It was well known even when I first came to the Magnavox Company, that a diaphragm should be free to move. As a matter of fact when I was in the laboratory there I made a large number of diaphragms of various kinds and various sizes and helped to test them out. I remember particularly one device which was made, and I think it was probably made before I came there, at least I saw it around 1920, which had the whole thing enlarged, both the field, the diaphragm, the sound box and everything." (R. 398-399.)

THE PRIOR ART RELIED UPON BY DEFENDANTS.

Of the many patents set up in the answer and offered in evidence, none appears ever to have made any impression on the art. In any event, the evidence fails to show that they were attended by any practical or commercial use. It appears that Lodge built a laboratory model of a loud speaker, but it was of such an impractical and incomplete character that Dr. Lodge himself, giving his deposition in this case, said:

*The reference letters used by Mr. Metcalf are those found on the drawing of the Magnavox instrument appearing in the chart, Plaintiff's Exhibit 16, page 22, Book of Exhibits.

“I should not call it an apparatus. I should call it a temporary arrangement for a laboratory demonstration.” (R. 312.)

The best and closest references, according to defendants' expert, Fouts, are Siemens' British patent 4685 of 1877, as against the first patent in suit, and the Lodge publications plus the United States patent to Pollak, as against the second patent in suit. (R. 161, 162 and 165.)

Prior art as against first patent in suit.

Defendants' expert admitted that Siemens failed to show the important feature of the first patent in suit, namely, bringing the fine, thin wires from the moving coil out along the diaphragm, and connecting them to heavier leads at a point between the center and periphery of the diaphragm, so as to overcome breakage. It is true that defendants' counsel argued that the Edison patents, British 2909 and United States 203,015; Rogers 297,168; Richards 521,220, and Shreeve 602,174, were extremely pertinent; but the expert Fouts made no mention of any of these when selecting his best and closest reference.

These last-mentioned patents all show *transmitters* of the carbon granule type wherein very slight movements of the diaphragm, caused by sound waves from the speaker's voice, act upon the carbon in such a way as to set up variable currents in a telephone circuit. These carbon granules are placed in a small chamber at the center of the diaphragm, and current-carrying wires lead from this chamber to a point on the housing which encloses the diaphragm. These

wires may in some instances parallel the diaphragm, on account of the small and compact construction of the transmitter, but they do not function as in plaintiff's patent, nor are they intended to serve any such purpose as the patentees had in mind. Mr. Metcalf points out this distinction at R. 407, where he says there is no such motion of the diaphragm as would cause any breakage of wire, for the reason that:

“They are telephone transmitters, and even though you got up close to them and spoke as loudly as you could, you could not move that diaphragm, I do not believe one-tenth or even one hundredth, as far as the diaphragm of these dynamic speakers move.” (R. 407.)

Since there is no moving coil in a magnetic field in any of the patents to Edison, Rogers, Richards and Shreeve, it is obvious that the problem which Pridham and Jensen met and solved in connection with a loud speaker was entirely absent in these transmitter patents, and they cannot properly be used as anticipations.

The contention which defendants' counsel makes here, to-wit, piecemeal anticipation, is the exact opposite of the position he so successfully assumed as counsel for the plaintiff in the case of *Doble v. Pelton*, 186 Fed. 526 (N. D. Cal.; affirmed 190 Fed. 760) (C. C. A. 9th Circuit).

Prior art as against second patent.

The Lodge and Robinson depositions taken by plaintiff in London, and introduced at the trial, show that the Lodge Syntonic Receiver as shown in Fig. 5 of

The Electrician, page 123, Book of Exhibits, was not a loud speaker in any sense of the word, for Dr. Lodge himself said:

“They were mostly not for talking, but for hearing a special tone. There was a tuning fork in some of them so that it would not respond to any but a particular tone.” (R. 305.)

“I was thinking of a call for the syntonic telegraphy.” (R. 311.)

“I was not exactly thinking of a loud speaker in connection with that arrangement.” (R. 311.)

When Dr. Lodge was asked on cross-examination if an apparatus of this sort, namely, the syntonic receiver, were attached to the output side of a powerful modern wireless set, it would give audible sound, he replied:

“It would give audible sound, *but it is not adapted for speech*. I think it is more adapted for a single tone.” (R. 314-15.)

No practical use was ever made of this syntonic receiver, and Dr. Lodge testified that about the beginning of the war some of these devices were turned over to the War Department:

“for hearing and recording the sound of a gun at several stations simultaneously so that from the delay in receiving the signals at different distances, they could estimate the position of the gun.” (R. 306.)

It appears from the testimony that Dr. Lodge's scheme was good in theory but that the apparatus which he supplied to the War Department was insufficient, for he admits:

“They used a different microphone—a different receiving instrument—which was simpler and better than those I sent.” (R. 306.)

The Lodge “loud speaker” (so-called) is shown in the drawing, Plaintiff’s Exhibit 7.* As Mr. Robinson, the assistant to Dr. Lodge, testified on cross-examination, in comparing this device with the Lodge Syntonic Receiver:

“They are two different instruments; that is a Lodge loud one (pointing to Plaintiff’s Commission Exhibit No. 1)* and that is not (pointing to Fig. 5 of the ‘Electrician.’ ” (R. 295.)

“The apparatus shown in the figure (Fig. 5) *is not a loud speaker*. It is referred to as a sensitive type of telephone equal to the Collier and no doubt it was if you put your ear on the board. You could not describe the Fig. 5 form as a loud speaker any more than you could a Collier.” (R. 296.)

“As far as I remember it was more a receiver to do with telegraphy.” (R. 300.)

In regard to the so-called “loud speaker” as distinguished from the “syntonic” receiver, Mr. Robinson described the apparatus as follows:

“A. 16. Well, the loud speaker that I made up to Sir Oliver’s instructions consisted of a movable coil fixed to a board about 4 ft. square and about $\frac{3}{8}$ ” in thickness; it may have been as much as $\frac{1}{2}$ ”, but that was about the size of it, and this coil was capable of moving in an annular gap of an electro magnet. I think that describes it.

Q. 17. How was the board supported?

*Drawing at page 19, Book of Exhibits.

A. 17. It was supported on three iron rods capable of adjustment for height in order that the coil could move freely in its annular gap.

Q. 18. What were these three rods mounted on?

A. 18. They were mounted on a table." (R. 279.)

As to the volume of sound produced by Lodge's instrument, Mr. Robinson testified, R. 290:

"It is not as loud as a person's speech, naturally."

It may, therefore, be said not to constitute a loud speaker, and the entire scheme was one of experiment and an attempted discovery which was never completed, because of lack of promising results.

Dr. Lodge himself corroborates Mr. Robinson in respect to the apparatus shown in Plaintiff's Exhibit 7, page 19, Book of Exhibits, and when asked if he recalled an apparatus being constructed in accordance with that drawing, said:

"I should not call it an apparatus; I should call it a temporary arrangement for a Lecture demonstration. After I had seen this drawing I remembered that kind of thing being shown at Liverpool. I had it in my Lecture room for showing to the students. It was rigged upon a Lecture table with a large board, 3 ft. or 4 ft. square, I should think, and with those adjustable supports holding it, but it was arranged for a temporary purpose. For the purpose of seeing how loud the speaker would be in the theatre. My recollection is that it was a big theatre and you could hear it all over, but that we never got

it so loud as one could speak. We got it loud enough to be audible, but not as loud as a man could shout. But what we got was the distinct utterance from it.” (R. 312.)

Part of the experimental device as actually constructed by Doctor Lodge and his associates is in evidence as Plaintiff’s Exhibit 13. Concerning this, Mr. Pridham testified:

“I have examined the Lodge instrument which is now marked in this case Plaintiff’s Exhibit 13. This instrument is a device made, according to Sir Oliver Lodge’s testimony, to use in his lectures. It is marked with the Roman numeral II. It indicates that it was exactly like the other instruments that were used in his so-called demonstrations. I would like to call attention to the fact that there was *no spacing means* within this cylinder such as Magnavox uses. The coil is loose in here, and would not operate to space the poles apart at all. This cap here, as far as anyone can tell, never had a sound-box mounted on it. Those two holes are for a spanner wrench to unscrew the top pole piece. The movable coil was put into the annular gap and moved up and down in there and was attached to a large sounding-board which was supported upon these retort stands, *and not connected in any way to the casing whatsoever.*” (R. 327.)

“Q. Would such a device as you have just described be susceptible of commercial manufacture, or shipment, or of use in a home?

* * * * *

A. It would not, for this reason: The instrument Sir Oliver Lodge made in London and

demonstrated in his lectures was a demonstrating device to illustrate a moving coil in a magnetic field. It operated so that a speech could be heard throughout a room—a theater, as he called it. He used ‘theater’ in the English sense, meaning a lecture room, as he states later on in his deposition. This instrument was not commercial in any respect that Sir Oliver Lodge demonstrated there. It had absolutely no means of holding a diaphragm as an integral part of the instrument. You could not ship it any place. Nobody could handle it except an expert. Experts set it up for his laboratory demonstration, and he demonstrated it.” (R. 327-328.)

Aside from the impossibility of maintaining the pole pieces of the Lodge device in properly spaced relation and keeping the moving coil in concentric position in the air gap, Lodge had a very inefficient instrument, as pointed out by Mr. Pridham as follows:

“The efficiency of the Lodge instrument would be very poor, for these reasons: It had a wide air gap; it had no means of holding pole pieces in correct spaced relation. The diaphragm was not mounted upon one of those poles. The coil was no way related in position with the air gap by any mechanical means associated with the instrument. Consequently, it would be very inefficient. His air gap is exceedingly wide, three-eighths of an inch, practically .375 of an inch, whereas in the modern instrument the air gap is .040 of an inch. It would take an enormous amount of wire for a magnetic field to get the same amount of density of magnetic lines in the air gap as is had with a very small quantity of

wire in the present day instruments—or Magnavox.” (R. 328-329.)

Lodge was constrained to use the wide air gap because of his failure to provide (a) spacing means for the pole pieces and (b) a physical connection such as a sound-box or housing between the diaphragm and the magnetic structure, whereby the moving coil would not shift its position within the air gap.

Regarding the Pollak patent, its lack of pertinency is pointed out by Mr. Pridham as follows:

“A. The United States patent to Pollak, 939,625, does not refer to a telephone reproducer; it refers to a telephone *transmitter*. The transmitter buttons are not located in any connection with the magnetizing device at all. Therefore, I hold that that is not a correct reference, because the claim 8 of the Magnavox patent distinctly states that the combination includes a diaphragm and sound-box mounted upon the outer pole of the magnetic structure. Nothing like that is shown in Pollak.” (R. 275.)

In referring to the Lodge British patent and the model shown in the drawing at page 19 of the Book of Exhibits, Mr. Metcalf testified:

“A. One of the necessary things for a commercial device to have is portability, something which can be shipped, and the Lodge device is an assembled procedure. The flat sounding board D is resting lightly on the supports, which we are given to understand are chemical retort stands, and one very interesting thing which I think can be proven very quickly is that unless the diaphragm there, or the sound board, is screwed

down it will creep, the jiggling would creep it off the support and the coil would rub in the air gap and it would in no way be commercial.” (R. 395.)

As for the Lodge Syntonic Receiver shown in Fig. 5 of “The Electrician,” appearing at page 123, Book of Exhibits, Mr. Metcalf said:

“A. A syntonic receiver might be compared, perhaps, to an automobile horn where it makes a noise of constant frequency. Now the mere fact that a device such as Lodge states in his first type of device, that when it was loaded with a moving coil it became useless for a syntonic receiver, does not in any way mean that it became a wonderful loud speaker. The chances are a thousand to one, if it became useless as a syntonic receiver, it became absolutely worthless as a reproducer of all frequencies. Now one of the surest ways to ruin the reproduction from any polytonic receiver, as you might call it, would be to load it, to dampen it, and if the addition of this coil made it so dampened that it would not act as a syntonic receiver, I can not see how in the world it would make it so that it would respond to all frequencies.” (R. 395-6.)

With regard to the Johnsen patent 1,075,786, Mr. Metcalf testified:

“That Johnsen patent is a puzzle if you read it carefully, because in it he states that magnetic material is to be put on the moving coil. First and foremost, any magnetic material on a moving coil of that type would lock and stick that moving coil to the casing so hard that it could not move. In the second place, there is no peripheral support

for the diaphragm and I can not see how you would get anything other than a pumping back and forth of that diaphragm D, and I can not see how you would get any sound out of it at all." (R. 396.)

In explaining the Pollak patent 939,625, the same witness said:

"Pollak shows a double-ended device with an air gap in each end. In the air gap are moving coils to which are attached what presumably might be taken as a diaphragm. It is impossible to tell from the patent whether those diaphragms move in phase or whether they move out of phase, and it appears that the coils are held in the gap by two strips which pass over the face of the top plate, and if that is so, the coils would not be able to move except in one direction; they would be held from going in toward the center of the device because of the strips; they could not go both ways from zero. There is nothing which indicates the sound box or anything of that sort.

Q. In other words, it would not be a loudspeaker at all, would it?

A. No. As I remember it, those things that look like diaphragms were portions of a telephone transmitter." (R. 396-7.)

In explaining the Oliver patent 951,695, Mr. Metcalf testified:

"A. The whole secret of a loudspeaker is a device which can give a substantial motion to a diaphragm. Oliver shows a diaphragm and sound box, the diaphragm having the main moving coil placed away out near the periphery, and it would be impossible for a device of that sort to operate

with any wide amplitude. In addition it has no means for spacing pole pieces, and if a device of that sort were shipped, the weight of the coil would undoubtedly fall on the central pole piece and drive it out of position. That was one of the things which often occurred." (R. 397.)

By means of a chart (Plaintiff's Exhibit 16), a copy of which is in the Book of Exhibits at page 22, Mr. Pridham shows the essential requirements of a successful loud speaker and illustrates in what manner they are present in plaintiff's second patent, and wherein Lodge, Pollak, Johnsen, and Oliver lack most of these essentials.

These essentials (referring to the chart) may be set forth as follows:

1. *Magnetic Requirements:*

Requires narrowest possible air-gap between pole pieces A and B to receive moving coil C.

2. *Acoustical Requirements:*

Requires diaphragm D with large amplitude of motion, driven at its center E and restrained at its periphery F by means of sound box or equivalent holder.

3. *Mechanical Requirements:*

Requires maintaining coil C in exact center of narrow air gap, as by means of physical connections C with top plate and maintaining pole pieces in concentric relation, as by means of spacing device H.

Inspection of the chart will show that the prior art patents, none of which was ever embodied in physical form, other than Lodge, so far as this record shows, fail in all three respects above mentioned. While these early experimenters no doubt recognized the need for the narrowest possible air gap, they could not supply it because they failed to provide any spacing device between the two pole pieces, and their diaphragms which carry the moving coil are not fixedly associated with the magnetic structure. Therefore, to get the device to operate at all they had to use a comparatively wide air gap, to allow for possible lateral maladjustment or displacement between the moving coil and the pole pieces. They all fail to support the diaphragm peripherally, with the possible exception of Oliver, and that is a mere ear-phone and the magnetic structure is not a cylinder or a pot-like structure, but a horseshoe.

Each and all of the prior art patents relied upon by defendants lack those features of mechanical construction which Mr. Pridham has testified are necessary to the production of an instrument which may function satisfactorily in the hands of the public and possess the inherent ability to withstand rough usage, as in shipment or when placed in the hands of unskilled or careless users, without permitting the delicate and finely-adjusted pole pieces and moving coil to get out of alignment. As Mr. Pridham at R. 259-260 testified:

“It would not get out of order; it was exceedingly robust. At one time in giving a demonstration at the Bureau of Standards an instrument

dropped out of the second story window while they were receiving radio signals, I believe, from Honolulu, or from some distant station. We went out and picked up the instrument and hooked onto the line again and it still operated. That shows the very robust construction of the instrument. That instrument, which is the subject of this patent, completely solved our difficulties in presenting to the world a successful dynamic loudspeaker.”

While this may be said to be an unusual example, the fact remains that such things have to be taken into consideration by the inventor who intends to entrust his product in the hands of the public.

In answer to an inquiry by the Court as to the elements contained in a successful dynamic loud speaker, Mr. Pridham testified:

“A. The elements contained in a successful dynamic loudspeaker consists of a magnetic structure in which there exists a narrow air gap. There must be means to hold the poles which form that narrow air gap in spaced relation. There must be a diaphragm mounted upon one of those poles. The diaphragm must, of course, be held in some supporting medium like the rings or sound-box. The coil must extend into the narrow air gap so as to be free to vibrate over its full range without coming in contact with the poles. That diaphragm can be either enclosed or exposed. A horn may be used on the diaphragm or the horn may be dispensed with, according to the size of the diaphragm.” (R. 271.)

It will be obvious that these elements are present in the second patent in suit and are also present in

defendants' structures, although most of them are lacking from the disclosures of the prior art. While it may be true that certain of these elements may be found in one of the prior patents and certain others in a different prior patent, the fact remains that there is *no one, single, prior patent or prior structure, standing alone*, which exhibits those elements necessary to constitute a commercial and successful and efficient loud speaker such as shown and claimed in the Pridham and Jensen patent and in substance embodied in defendants' structures.

The Supreme Court has many times declared the rule for determining anticipation or lack of invention, and it is succinctly set forth in *Hobbs v. Beach*, 180 U. S. 383, as follows:

“While none of the elements of the Beach patent—taken separately or perhaps even in a somewhat similar combination—was new, their adaptation to this new use and the minor changes required for that purpose resulted in the establishment of practically a new industry, and was a decided step in advance of any that had theretofore been made.” (Page 392.)

Likewise, in *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U. S. 428:

“Many things, and the patent laws abound in illustrations, seem obvious after they have been done, and ‘in the light of the accomplished result’ it is often a matter of wonder how they so long ‘eluded the search of the discoverer and set at defiance the speculations of inventive genius.’ *Pearl v. Ocean Mills*, 11 Off. Gaz. 2. Knowledge after the event is always easy, and problems once

solved present no difficulties, indeed, may be represented as never having had any, and expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skillful attention. But the law has other tests of the invention than subtle conjectures of what might have been seen and yet was not. It regards a change as evidence of novelty, the acceptance and utility of change as a further evidence, even as demonstration.”

**NEW RESULTS ACCOMPLISHED IN AND BY THE PATENTS
IN SUIT.**

Explaining the new results accomplished by the patents in suit, Mr. Pridham testified:

“A. A very distinct new result was accomplished in producing a mechanical instrument in which a vibration of the movable coil could take place in the magnetic field with sufficient amplitude to create a very large amount of sound, so that the operating circuit to the coil would not be broken. *That was the new result obtained under claim 8 of the first patent.* The decidedly new result obtained by us from the invention as represented in the other patent was the development of a loudspeaker which was commercial in all its forms; it permitted a very great amplitude of movement of the movable coil; it permitted commercial operation and shipment of the instrument; it permitted the instrument to have great acoustical efficiency and mechanical efficiency. In fact, it was a successful instrument from the standpoint of commercial use. The fact

that the pole pieces were held in spaced relation within the casing and a flat plate was used as one of the poles and the sound-box with its diaphragm was mounted on one of those poles to be in steady fixed relation with the concentric air gap gave us an instrument which had not been produced before, and *it produced an entirely new result that had not been produced before.*" (R. 343-344.)

Making a device practical and effective where earlier devices or schemes are proven to have been impractical and ineffective for the purpose intended, is not a "mere carrying forward" such as this Court had under consideration in *Ray v. Bunting*, 4 Fed. (2d) 214, and *Elliott v. Smith*, 50 Fed. (2d) 813, relied upon by defendants. Rather it is a new result such as will support a patent and entitle it to a liberal construction.

In the case of *Keystone Mfg. Co. v. Adams*, 151 U. S. 139, the Court said:

"It must be admitted that both of these patents granted to Augustus Adams, one in 1861, the other in 1866, describe mechanical contrivances closely resembling the invention in question, patented by H. A. Adams, October 15, 1872. There is present in all three machines a rotating shaft with spurs or wings, and the purpose sought to be effected is the same.

But, as we have seen, when the test of practical success is applied, the conclusion is favorable to the last patent.

Where the patented invention consists of an improvement of machines previously existing, it

is not always easy to point out what it is that distinguishes a new and successful machine from an old and ineffectual one. But when, in a class of machines so widely used as those in question, it is made to appear that at last, after repeated and futile attempts, a machine has been contrived which accomplishes the result desired, and when the Patent Office has granted a patent to the successful inventor, the courts should not be ready to adopt a narrow or astute construction, fatal to the grant." (Pages 144-145.)

Again, in the *Barbed Wire Patent*, 143 U. S. 275, the change over the prior art consisted of a slight change in the shape of the barb, from a diamond-shaped prong to a twisted wire having a beveled prong. In sustaining the patent the Court said:

"The difference between the Kelly fence (prior art) and the Glidden fence (patent in suit) is not a radical one, but slight as it may seem to be, it was apparently this which made the barbed-wire fence a *practical and commercial success.*"

The Court then goes on to say:

"In the law of patents it is the last step that wins. It may be strange that, considering the important results obtained by Kelly in his patent, it did not occur to him to substitute a coiled wire in place of the diamond shape prong, but evidently it did not; and to the man to whom it did ought not to be denied the quality of inventor. There are many instances in the reported decisions of this court where a monopoly has been sustained in favor of the last of a series of inventors, all of whom were groping to attain

a certain result, which only the last one of the number seemed able to grasp." (Page 283.)

In this case it may seem strange (at least from the defendants' viewpoint) that it did not occur to Lodge in his patent to center the inner and outer poles by means of a spacing ring attached to the under side of the top plate and fitting snugly over the center pole, and to employ as a sound reproducing diaphragm something smaller than the large deal board mounted independently of the magnetizing structure, and to support the diaphragm peripherally in a housing, which housing is directly fixed to the top plate of the magnetizing structure so as to locate and retain the moving coil in its narrow air gap. Had Lodge thought of these changes, he would have been able to make his air gap considerably narrower, and instead of obtaining sounds "not as loud as a person's speech", he would have obtained sounds in such volume as could be heard a distance of several miles.

**PRIOR ART DID NOT TEACH SOLUTION OF THE PROBLEMS
CONFRONTING PRIDHAM AND JENSEN.**

It is clear from the testimony given by Mr. Pridham, that the problems which confronted Pridham and Jensen and which they successfully solved, were difficult of solution, and that the patentees of the prior patents, while probably appreciating that the narrowest possible air gap would increase the efficiency of the device, failed to so design their structures as to permit of the use of an extremely narrow air gap or

a diaphragm so mounted as to insure maintenance of the moving coil in the narrow air gap.

The alignment and centering of the pole pieces in the Lodge British patent is one of haphazardness. The collars *f* shown in Sheet 1 of this patent are merely intended to serve as vertical supports for the plate *c''*, and nothing is said concerning an accurately fitted spacing ring similar to Pridham and Jensen's spacing member 11 of the second patent in suit. Moreover, these collars *f* are shown only in connection with a multi-polar instrument; and in those instances where Lodge concerned himself with a cylindrical form of casing having a single central inner pole piece, nothing in the nature of the collars *f* was used. (See Fig. 7; also Plff's. Exhibit 13.) Merely fastening the outer pole piece upon the cylindrical casing by means of bolts, screws, or like fastening means, would not serve the purpose of accurate spacing, for the reason that these fastening devices can not be accurately gauged and fitted as in the case of the Pridham and Jensen spacing ring. Moreover, such fastening devices are bound to become loosened after a certain amount of use of the instrument, as there is considerable vibration produced throughout the instrument by the operation of the moving coil and diaphragm.

It has also been contended by defendants that the upper end of the spool upon which the magnetizing coil is wound in the Lodge syntonie device functions as a spacing member for the pole pieces; but there is no disclosure of this in the Lodge publications. Moreover, the spool-ends are usually made of non-metallic

material such as paper, fiber, or some composition of more or less yielding character and not accurately gauged to fit tightly within the cylinder. On the contrary, these spool-ends should be of relatively loose fit, in order that the coil may be inserted and removed without difficulty. In actual production very great tolerance would have to be allowed for, so that any one coil out of a large lot could be dropped into any one of a large number of cylinders.

Concerning Lodge's shelf-like support *f* and the spool ends of his syntonic receiver, since they were not intended to or adapted to serve the purpose of plaintiff's spacing means 11, the language of the Supreme Court in *Topliff v. Topliff*, 145 U. S. 156 applies with peculiar force. There it was said:

“While it is possible that the Stringfellow and Surles patent might, by a slight modification, be made to perform the function of equalizing the springs which it was the object of the Augur patent to secure, that was evidently not in the mind of the patentees, and the patent is inoperative for that purpose. Their device evidently approached very near the idea of an equalizer; but the idea did not apparently dawn upon them, nor was there anything in their patent which would have suggested it to a mechanic of ordinary intelligence, unless he were examining it for that purpose. It is not sufficient to constitute an anticipation that the device relied upon might, by modification, be made to accomplish the function performed by the patent in question, if it were not designed by its maker, nor adapted, nor actually used, for the performance of such functions.” (Page 161.)

It is clear that Lodge in his British patent considered it necessary for loud speaking purposes to employ a large sound board—so large that it could not be fitted into a sound box or a housing and the latter be kept within such proportions as would enable it to be fixed to the top plate of the magnetizing structure in a manner that would insure correct disposition and maintenance of the moving coil in the narrow air gap.

Mr. Pridham in explaining these problems testified:

“However, if you do have a narrow air gap you are immediately confronted with a serious problem, because there is a very intense magnetic attraction between the poles of the air gap, especially in an electrodynamic receiver where you have from 10,000 to 20,000 lines per square centimeter, and this attraction is very, very great. The slightest tendency of the poles to get off center will immediately shift that pole over and it will contact with the air gap to close the circuit. In general, the more narrow the air gap the more dangerous the situation becomes as to keeping that air gap in its true form.

Q. With regard to arranging the movable coil in that gap, does that present any problem?

A. That presents a very difficult problem indeed. It is not only necessary to space the two poles apart to form a very narrow concentric air gap, but it is very necessary to so arrange that coil in the air gap that it may vibrate up and down, an axial motion, the vibration of a quarter to half an inch, whereas the distance between the pole faces and the coil may be only .002 or .003 of an inch. That is a very serious problem, and it

is a problem that Magnavox conquered by mounting the diaphragm with its coil on one of the spaced poles, the other being of course spaced from the first one, and the diaphragm with its attendant coil mounted on the first pole; consequently, the coil was rigidly positioned in respect to this concentric air gap.

Q. And in your opinion are those problems which readily could be solved by the ordinary electrician or mechanic?

A. They are by no means easy problems to solve. It took us, you might say, from 1911 to 1920 to solve those problems, with a very urgent desire to solve them and a very urgent need to solve them." (R. 372-3.)

In strong contrast with the struggles which Pridham and Jensen went through to give to the world a practical and efficient loud speaker, is the spectacle presented by one of the defendants (namely, Stromberg-Carlson Company) which for several years purchased and used Magnavox devices of the type marked "Plff's. Exhibit 20", and then, after learning all there was to know about the construction and assembly of the loud speaker, and desiring to appropriate to themselves the profits which Magnavox Company had been making as the manufacturer, proceeded to make a substantial copy of the Magnavox instrument and thereafter to manufacture it in large quantities in violation of the rights of plaintiff. (R. 346.)

Quite appropriately the language of the Court of Appeals, 3rd Circuit, in *Consolidated Window Glass Co. v. Window Glass Mach. Co.*, 261 Fed. 362, may be applied to the present situation:

“Nor should these earlier, but abortive, attempts which resulted in absolutely nothing, shield and protect from infringement and accounting those who copied not the abortive failures, but the successful steps of the originators of machine-drawn glass.” (Page 369.)

As said by this Court in *Pelton Water Wheel Co. v. Doble*, 190 Fed. 760:

“It is urged that the addition of this feature to the combination does not show invention; that it was to do the obvious thing, that which any mechanic would have done when called upon to remedy the known defects of prior devices. To this it is to be said, among other things, that although the defects of the nozzles which had been in use for many years prior to Doble’s invention were well known and recognized, and mechanics and engineers had been called upon to remedy them, no one prior to Doble thought of the simple expedient of changing the axis of the pipe from the horizontal to the perpendicular. *That one step in the art marked success in the combination.*” (Page 763.)

The Court of Appeals, 10th Circuit, in the recent case of *Hughes Tool Co. v. International Supply Co.*, 47 Fed. (2d) 490, cited the *Pelton* case and followed the doctrine thereof. Therein, Judge Cotteral said:

“And where an existing patent is deficient and the prolonged efforts of experts have failed to remedy it, the discovery of the needed improvement, added to its commercial success and the presumption of validity, justifies the conclusion that it is due to invention and not mechanical skill.”

LEGAL SIGNIFICANCE OF WIDESPREAD ADOPTION, AND
SUPPLANTING OF EARLIER DEVICES.

The undisputed evidence is to the effect that Pridham and Jensen started their experiments several years before the Panama-Pacific Exposition of 1915 in San Francisco; that they produced a workable loud speaker which they were able to demonstrate in that year. That speaker had to do with the first patent in suit, but because of its flat-coil construction and its horseshoe magnet, they were not enabled to manufacture, sell, and distribute it to any considerable extent. In 1919 they arrived at the construction of the second patent. This latter was a commercial success from the outset and was really the first dynamic loud speaker that was so constructed that it could be entrusted in the hands of the public with any degree of confidence that it would continue to operate under any and all conditions.

The record shows that Magnavox Company has sold approximately one and one-half millions of the loud speakers covered by the patents in suit, these devices having a value of approximately fourteen million dollars. (R. 345.) These figures do not include loud speakers made and sold by the licensees, on which substantial royalties have been paid to plaintiff. Among such licensees is the gigantic Grigsby-Grunow Company, manufacturers of "Majestic" radios and loud speakers. (R. 346.)

The acclaim and success with which the Magnavox dynamic instrument met is not only shown by the testimony of numerous witnesses familiar with the trade, viz., Linden, Warner, Eiberle, Zemansky, Met-

calf, and Pridham, and the several scientific publications identified by them, but is also written into the records of litigation where Magnavox was not a party nor in any wise a participant. Thus, in the case of *Western Electric Co. v. Kersten Radio Equipment, Inc.*, 44 Fed. (2d) 644, tried in the Western District of Michigan, wherein was involved a newly-issued dynamic loud speaker patent having to do with certain refinements, the Court said in considering the prior art (much the same as presented here):

“None of them, with the exception of Pridham and Jensen, No. 1,448,279, found commercial use.” (Page 645.)

“The record discloses that none of the cited prior art devices is capable of reproducing the necessary range of frequencies nor the overtones to give them other than extremely limited value in any commercial field. *The one exception is the Magnavox of the Pridham and Jensen patent.* * * * *It appears that none of the prior art devices, with the exception of Magnavox, has found any commercial use.*” (Page 646.)

In *Minerals Separation v. Hyde*, 242 U. S. 261, it was said:

“The record shows not only that the process in suit was promptly considered by the patentees as an original and important discovery, but that it was immediately generally accepted as so great an advance over any process known before that, without puffing or other business exploitation, it promptly came into extensive use for the concentration of ores in most, if not all, of the principal mining countries of the world, notably in the

United States, Australia, Sweden, Chile, and Cuba, and that, because of its economy and simplicity, it has largely replaced all earlier processes. This, of itself, is persuasive evidence of that invention which it is the purpose of the patent laws to reward and protect. *Diamond Rubber Co. v. Consolidated Rubber Tire Co.*, 220 U. S. 428, 55 L. ed. 527, 31 Sup. Ct. Rep. 444; *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U. S. 403, 429, 430, 46 L. ed. 968, 983, 22 Sup. Ct. Rep. 698; *Barbed Wire Patent (Washburn & M. Mfg. Co. v. Beat Em All Barbed Wire Co.)*, 143 U. S. 275, 36 L. ed. 154, 12 Sup. Ct. Rep. 443, 450; *Smith v. Goodyear Dental Vulcanite Co.*, 93 U. S. 486, 23 L. ed. 952.”

To the same effect is the ruling of this Court in *Sherman-Clay & Co. v. Searchlight Horn Co.*, 214 Fed. 86, where it was held that it is proper to charge a jury that the fact that a device has gone into general use and has supplanted other devices used for a similar purpose, is sufficient evidence of invention, in the absence of evidence to show that the success was due to any other cause than that of the merits of the device.

In *Hartford-Empire Co. v. Hazel-Atlas Glass Co.*, 59 Fed. (2d) 399 (C. C. A. 3rd Circuit), it was said:

“And where an art, eager for relief, found in these moribund patents nothing to meet that suggested solution, it is safer to rely evidentially on the then judgment, attitude, and conduct of the glass trade rather than on the post litem testimony of experts, the contentions of infringers, and the theoretical construction that often tempts

courts to create out of lifeless patents an imaginary machine on paper which a working art could not do in steel." (Page 413.)

Likewise, applicable to the facts herein, is the principle enunciated by the Second Circuit Court of Appeals in *General Electric Co. v. U. S. Electric Mfg. Co.*, 63 Fed. (2d) 764, as follows:

"In the 'plaster ear' patent we find a practical and commercially successful, solution of a long-felt difficulty which many others had sought to obviate. Such striving and failure followed by ultimate success on the part of the patentee is the strongest proof of invention." (Page 767.)

CONCLUSION.

Practically every test laid down by the Courts for determining the presence of invention of a meritorious character applies to the patents in suit. The evidence supporting the same is not in dispute. There is no gainsaying the fact that the closest prior patents fall far short of giving the information necessary to produce a loud speaker having the characteristics and advantages of the Magnavox Speaker, as shown and described in the second patent in suit. These may be conveniently summed up as follows:

- (1) A successful unitary dynamic type loud speaker bringing to the home for the first time:
- (2) Loud reproduction of music and speech.
- (3) Acoustical accuracy over the full range of audible frequencies (due to peripheral support for the diaphragm).

(4) No rattling of the voice coil against the pole pieces (due to spacing means and to affixing the diaphragm and its housing upon the top plate).

(5) A large amplitude of movement of the voice coil so that all frequencies were reproduced.

(6) An even strength of magnetic field (due to spacing means).

(7) A single unit, completed assembly, compact and foolproof (due to affixing the diaphragm and its housing upon the top plate).

(8) No possibility of vital parts getting out of adjustment.

(9) Assembly in the factory or by dealers without use of jigs or special tools.

(10) Economy in amount of copper wire for coil of magnet (due to narrow air gap).

(11) Economy in current requirements for the field coil, due to compactness and proper positioning of parts.

There is no denial that these features are present in defendants' devices. While they may not be set forth in the patent description in the manner above mentioned, they are inherent in the structure illustrated, described and claimed, and it is well settled that an inventor is entitled to all that his patent fairly covers, even though its complete capacity is not recited in the specifications and may have been unknown to the inventor prior to the time it issued. (*Diamond*

Rubber Co. v. Consolidated Rubber Tire Co., 220 U. S. 428.)

Considering the merit of the Pridham and Jensen inventions, the law invests the patents with such a range of equivalents that any finding of non-infringement by the structures herein complained of is plain error, and the decree of dismissal should be reversed.

Dated, San Francisco,
March 1, 1934.

Respectfully submitted,

CHARLES E. TOWNSEND,

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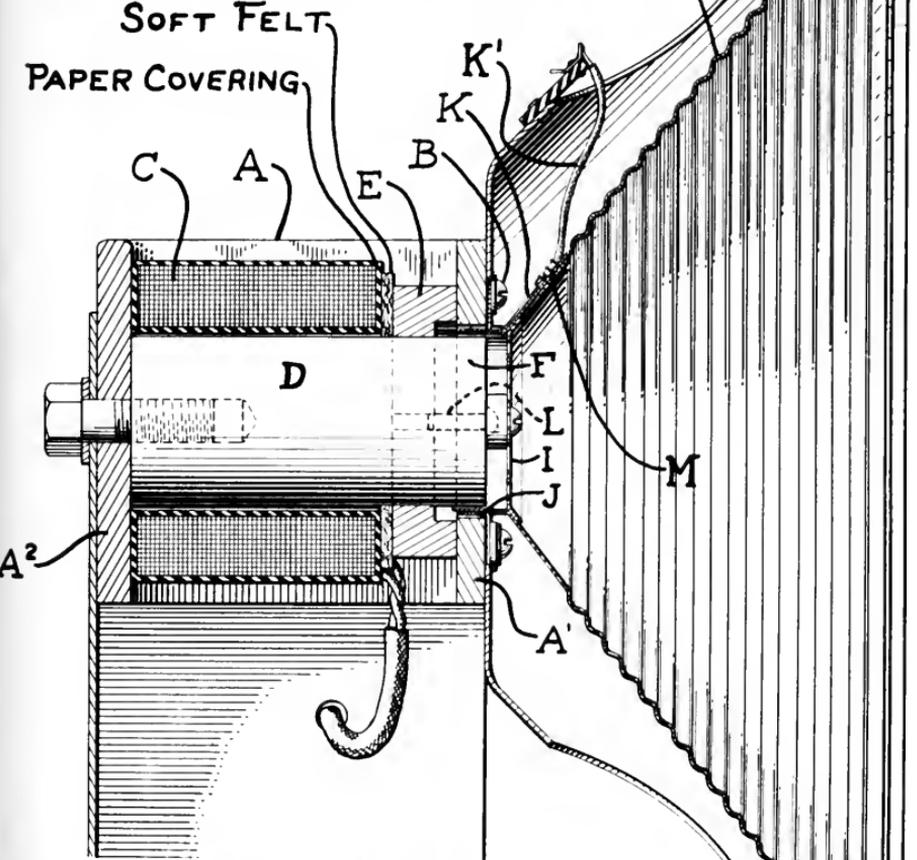
Attorneys for Appellant.



CROSS-SECTION OF STROMBERG-CARLSON LOUD SPEAKER
COMPARED WITH CLAIMS OF THE TWO PATENTS IN SUIT:

Claim 8, Patent No. 1,266,988:

- In a receiver for telephony, the combination with
1. a sound box and its diaphragm (H and G),
 2. of a magnetic field (gap between pole pieces A' and F),
 3. a vibrating conducting coil (J) for the telephonic currents disposed in said field and rigidly secured to the diaphragm;
 4. and connections (K) between said coil and the operating circuit (K') comprising thin metallic strips secured to the diaphragm.



Claim 8, Patent No. 1,448,279:

- An electro-dynamic receiver comprising:
1. a shell or casing (A) having bottom and side walls formed of magnetizable material,
 2. a magnetizing coil (C) within said casing,
 3. a core (D) for the coil extending from the bottom of the casing to the top thereof and formed at its upper end with an inner pole piece (F),
 4. an outer pole piece (A') in the form of a flat plate arranged upon the casing and having a central opening surrounding the



No. 7284

IN THE
United States Circuit Court of Appeals
For the Ninth Circuit

THE MAGNAVOX COMPANY (a corporation),
Appellant,

vs.

ERNEST INGOLD, INC. (a corporation),
Appellee.

THE MAGNAVOX COMPANY (a corporation),
Appellant,

vs.

STROMBERG-CARLSON TELEPHONE MANUFACTUR-
ING COMPANY (a corporation), and GARNETT
YOUNG & Co. (a corporation),
Appellee.

BRIEF FOR APPELLEES.

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FILED

MAR 14 1934



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STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY (a corporation), and GARNETT YOUNG & Co. (a corporation),
Appellees.

BRIEF FOR APPELLEES.

STATEMENT OF FACTS.

The two cases here involved were consolidated for trial on one record.

Plaintiff in both cases is The Magnavox Company, an Arizona corporation, engaged in making and selling radio apparatus, particularly loud speakers used in broadcasting.

The defendant in the first case is Ernest Ingold, Inc., a California corporation, and, at the commencement of the suit, was selling at San Francisco radio loud speakers purchased from Atwater Kent Manufacturing Company, in Philadelphia, but on January 1, 1933, the Ingold Company retired from the radio business permanently and since then has sold no loud speakers of any kind or any other radio apparatus.

In the bill of complaint the Atwater Kent Mfg. Co. was originally joined as a co-defendant with the Ingold Company; but on motion made it was dismissed from the suit for lack of jurisdiction, being a non-resident and having no agent in California. Thereafter the case was continued against the Ingold Company alone.

Defendants in the second case are Stromberg-Carlson Telephone Manufacturing Company, a New York corporation, and Garnett Young & Company, a California corporation. The former is the manufacturer, and the latter the distributor of the accused device in California. Said device is substantially the same in construction and mode of operation as that of the Atwater Kent Mfg. Co., though differing in some of the details.

Two patents are involved, No. 1,266,988, dated May 21, 1918, and No. 1,448,279, dated March 13, 1923. Both are owned by The Magnavox Company as assignee of the patentees Edwin S. Pridham and Peter L. Jensen.

The first patent has 9 claims, but only claim 8 is relied on as being infringed.

The second patent has 10 claims, but only claim 8 thereof is relied upon.

A third patent is set up in the bill of complaint and charged therein to be infringed—No. 1,579,392, dated April 6, 1926,—but at the commencement of the trial the same was withdrawn by plaintiff's attorneys and is no longer in controversy.

DEFENSES STATED.

The defenses set up in the lower Court were *invalidity* and *non-infringement*.*

The judge of the trial Court did not pass on the question of validity; but held that even if the claims were valid, they were of such narrow scope that the defendants' structure did not infringe and therefore it was unnecessary to pass upon the validity of the patents. (R. pp. 35, 42.)

In this procedure the trial Court adopted the course followed by this Court in *Lektophone Corporation v. The Rola Company*, 34 Fed. (2d) 773. Therefore, the only question we shall argue here is that of non-infringement.

We take up patent No. 1,448,279 first, as that is the more important of the two. Only claim 8 thereof is relied upon.

*Where italics are used herein they may be deemed ours unless otherwise stated.

THERE IS NO INFRINGEMENT OF CLAIM 8 OF
PATENT NO. 1,448,279.

The correct solution of this issue depends upon the construction to be placed upon the claim.

It is settled law that where a claim does not embody a primary invention, but only an improvement over prior structures, the claim is not entitled to a broad construction, but must receive a narrow construction and be limited to the specific details shown.

Quoting from the decision of the Supreme Court in the case of *Cimiotti Unhairing Co. v. American Fur. Ref. Co.*, 198 U. S. 399, 414:

“Where the patent does not embody a primary invention but only an improvement on the prior art and the defendant’s machine can be differentiated, the charge of infringement is not sustained.”

Especially applicable is the decision of this Court in *Hardison v. Brinkman*, 156 Fed. 962, 967, where the opinion was penned by the late Judge Gilbert. And along the same lines is the decision of this Court in *Day v. Doble*, 42 Fed. (2d) 6, where the opinion was by the late Judge Dietrich.

It is our contention that the Pridham and Jensen claim under consideration is such a claim as is referred to in these cases.

In the memorandum decision of the lower Court (see p. 68 of Record) it was said:

“I find it unnecessary to pass upon the validity of the patents, limited as their interpretation must be by the state of the prior art. And after careful study of the patents, the prior art, the

law, and the facts, I have reached the conclusion that there is no infringement of claim 8 of either patent, and so find.”

It is the contention of the appellant that its patents relate to the radio broadcasting art and cover a broad invention in that art, which is of immense value. Hence, a brief reference to that art will be helpful.

PRELIMINARY OBSERVATIONS ON RADIO BROADCASTING.

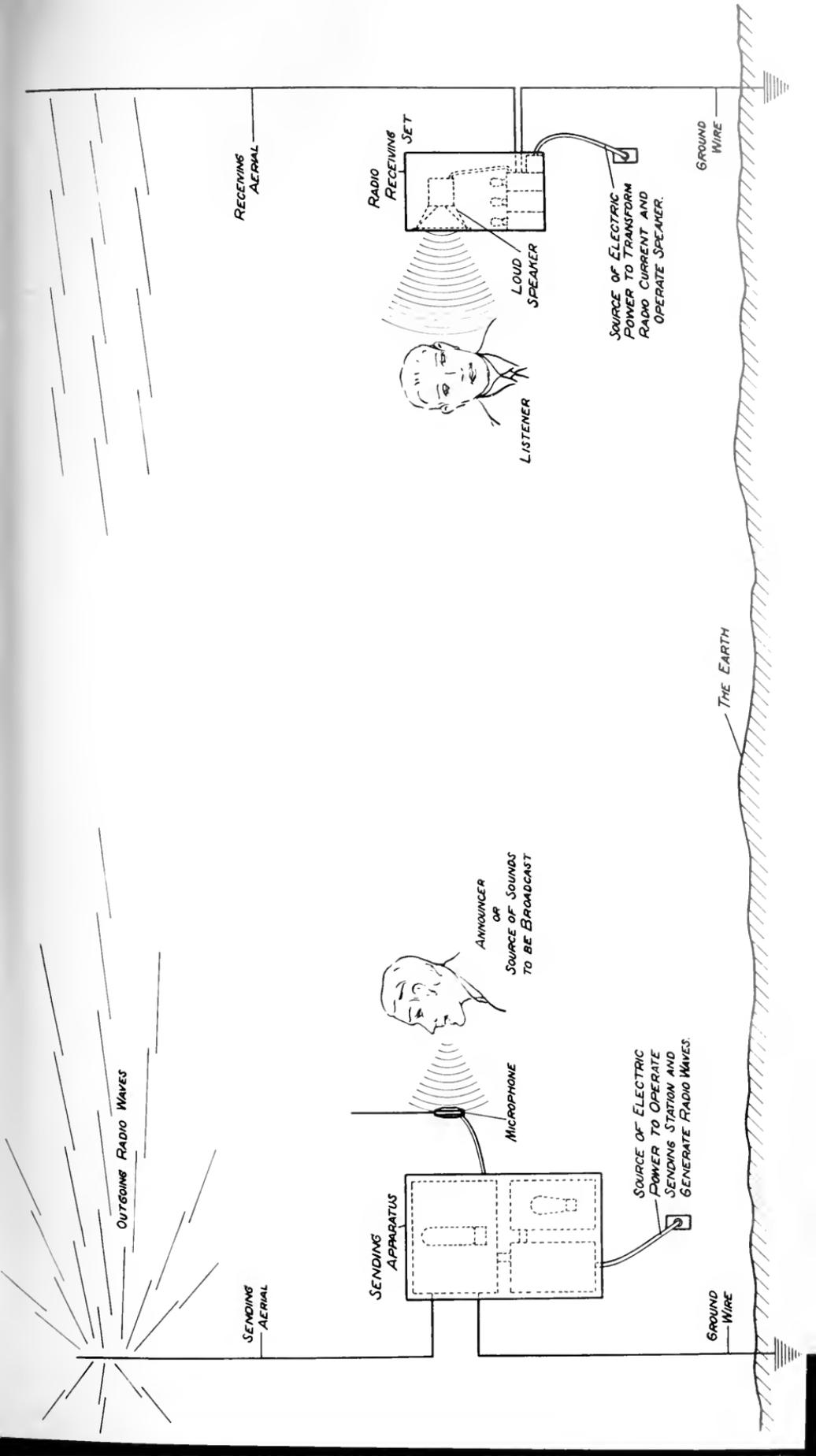
The radio art is now practiced throughout the civilized world. In the beginning it was looked upon merely as an interesting novelty, a scientific toy. Now it is considered to be a necessity of modern civilization. According to Funk & Wagnalls New Standard Encyclopedia (p. 488) there were in 1930 in the United States 617 public broadcasting stations, and 750 outside of the United States. Besides these the number of amateurs engaged in the art is legion. The money invested runs into millions, and the number of employees is untold. In fine, it is one of the fundamental instrumentalities of modern civilization.

Substantially all the receiving stations now use the vibrating free air cone construction. If the contention of The Magnavox Company, as stated by its counsel, is sustained, the result will be to give that company complete dominion over all the vibrating free air cone devices, and, indirectly, dominion over the art as now practiced. This would render liable to injunction and closure practically all the receiving stations in the United States utilizing the free air cone

construction, unless some other method could be devised for receiving radio communications.

Radio broadcasting, generically considered, consists in first generating a high frequency radio carrier wave by the apparatus in a sending station and then modulating the same by the sound waves from a microphone and applying the modulated waves to the antenna of the sending station, from which antenna they are projected into the atmosphere in all directions. When they reach the receiving station they are demodulated and reach the ear of the listener as audible sound.

The process may be roughly illustrated by the diagram on the adjoining page. On the left-hand side is the sending station containing apparatus called a radio "set," comprising vacuum tubes and instruments of delicate construction. Connected with this set is a source of electricity shown in the picture just below the set, which communicates with the apparatus above and generates a high frequency radio carrier wave. The announcer speaks into the microphone, thereby generating sound waves. When these sound waves enter the apparatus, or "set" as it is called, they have the effect of modulating the carrier waves, that is to say, impressing upon them the characteristics of the sound waves. After being amplified many times by the vacuum tubes the modulated waves pass to the aerial antenna shown at the left and are projected into the atmosphere in all directions. When they reach the antenna of the receiving station at the right-hand side, they pass into the receiving "set" there located and are "demodulated," that is to say the sound waves are uncoupled from the carrier waves



OUTGOING RADIO WAVES

SENDING AERIAL

RECEIVING AERIAL

SENDING APPARATUS

RADIO RECEIVING SET



LISTENER

LOUD SPEAKER

SOURCE OF ELECTRIC POWER TO TRANSFORM RADIO CURRENT AND OPERATE SPEAKER.

GROUND WIRE

THE EARTH

ANNOUNCER OR SOURCE OF SOUNDS TO BE BROADCAST



MICROPHONE

SOURCE OF ELECTRIC POWER TO OPERATE SENDING STATION AND GENERATE RADIO WAVES.

GROUND WIRE



and we then have sound waves of the same characteristics as the original sound waves we started with. By suitable transforming apparatus they are made to vibrate the loud speaker located adjoining and thereby the same sounds are reproduced which were spoken into the microphone of the sending station.

The reason for using this carrier wave is its terrific speed. It travels at the rate of 186,000 miles per second, whereas sound travels at the rate of only 1100 feet per second. The carrier wave acts merely as a conveyance or carrier for the sound waves.

The whole proceeding is quite complex and the instrumentalities employed are exceedingly delicate and involve some abstruse principles of electricity.

No such thing is found in or can be spelled out of the Magnavox patents. There is not the slightest intimation or suggestion of any such thing, much less any disclosure thereof.

This omission is not surprising, because radio broadcasting did not come into vogue until after the applications for the patents in suit were filed. That art began tentatively in an experimental way in the latter part of 1921, and became fully established in 1922, whereas the Pridham and Jensen patents were applied for on July 3, 1916, and April 28, 1920, respectively. Therefore, Pridham and Jensen could not have had radio broadcasting in view.

Let us enquire then what is the art to which this Pridham and Jensen patent is addressed.

GENERAL CONSIDERATION OF PATENT NO. 1,448,279.

We take up the second patent first, as it is the more important of the two, and postpone consideration of the first patent until later.

This patent (1,448,279) relates to telephones, pure and simple, such as were in use at the time of and prior to the Pridham and Jensen invention; that is to say, the conventional telephone of commerce operating on a *wire circuit*. This is apparent from the face of the patent, in which Fig. 5 shows the usual telephone *wire circuit*, and this wire circuit is specifically described on page 2, lines 87 to 95, of the specification.

There is not the remotest hint or intimation that the invention was intended to be, or could be, used in a *wireless* or radio circuit.

In their specification the patentees say (p. 1, line 9 et seq.):

“This invention relates to *telephones* and more specifically to improvements in the moving coil type of telephone receivers. The receiving instrument which is the subject of this specification comprises an annular coil rigidly connected to the diaphragm. This coil is disposed, so as to be freely movable, in a strong concentric magnetic field produced either by a permanent or an electromagnet. The magnetic field is so arranged that the lines of force cut the annular coil at all points in the same direction. This is accomplished by having one of the poles of the magnet within the coil and the other completely surrounding it.”

The specification says, at page 1, line 39, et seq.

“Fig. 5 is a diagram showing the electrical connections for the receiver.”

Those electrical connections are the usual standard telephone connections, on a wire circuit.

On page 2, lines 87-95, the following description is found:

“The electrical connections for the receiver are shown in Fig. 5 and include an operating circuit 18 for the magnetizing coil 16. A transmitter 19 having an operating circuit 20 is also shown. Included in this operating circuit is the primary of an induction coil 21, the secondary of which is connected electrically with the vibrating coil 5.”

Nowhere in the specification do we find the words wireless, or radio, or loud speaker, or broadcasting, or any reference thereto, or any term or word relating specifically to radio broadcasting.

The invention is the ordinary telephone supplied with an electro-dynamic drive for the purpose of obtaining greater power and producing a louder sound, to the end that it may be heard over a wider area. In fine, it is a loud-sounding telephone. That is its sole object, so far as appears from the specification. In that respect it is in the same class as the telephone of Sir Oliver Lodge (of 1898) which was so loud sounding that in the provisional specification of his British patent he calls it “a bellowing telephone.” In that respect he says in his provisional specification, page 2, lines 2, 3, 4:

“I call it a bellowing telephone because a gentle tone at one end of the series becomes a shout at the other end.”

Judge Thatcher so terms it in the case of *Lekto-phone v. Western Electric*, 20 Fed. (2d) 151.

The Pridham and Jensen invention is such a "bellowing telephone," and if there be any difference it resides in the fact that Pridham and Jensen can "bellow" louder than Sir Oliver. The name Magnavox, *big voice*, is well chosen.

The use to which Pridham and Jensen put their telephone, prior to the time when they entered the radio field, is proof of our contention. The evidence shows that the device was at first used as a loud-sounding telephone over a wire circuit.

On referring to the numerous photographs and news clippings put in evidence by plaintiff to show the widespread use of the invention and its alleged acceptance by the public, it is to be noted that the instruments depicted are merely public address devices or annunciators used with horns.

Mr. Pridham described the operation of those devices in detail at pages 352-3-4 of the Record, saying that he used a microphone transmitter like an ordinary telephone and a loud speaker located a little distance away and connected to them by telephone wires. On page 353 he described the device being used by President Harding (Pliff's. Ex. 9, picture No. 1), saying:

"He talked through the microphone and that passed the sounds over the telephone wires to the horn, and the sounds were emitted from the horn. In all those pictures that is the same procedure."

This is the ordinary public address or annunciator system, such as was practiced prior to 1915 in railroad stations, hotels, and baseball parks.

Farrand testifies to the use of such a device in the waiting-room of the Grand Central Station in New York City for train annunciation prior to 1915. (R. p. 237.)

Dechow gave similar testimony and produced one of the devices as used in the White Sox Baseball Park at Chicago prior to 1915. (Marked Deft's. Ex. 38.)

It is such an announcing device as is used today at the major baseball parks during the progress of ball games for announcing the individual plays. It is also the device used on the public streets of large cities by peddlers and such like for advertising their wares from vehicles. In fact, the first one sold by Magnavox was sold to a magician called "Alexander the Great." (See testimony of Pridham, R. p. 347.) He undoubtedly used it as an announcing device, after the manner of magicians in general.

**ANALYSIS OF CLAIM 8 OF PATENT NO. 1,448,279
AS TO INFRINGEMENT.**

This claim calls for an electro-dynamic receiver for telephones comprising the following elements:

1. A shell or casing having bottom and side walls made of magnetizable material (e. g. iron).
2. A magnetizing coil within said casing. (This means the magnet winding.)
3. A core for the coil,
 - (a) extending from the bottom of the casing to the top thereof and
 - (b) *formed at its upper end with an inner pole piece.*

4. An outer pole piece in the form of a flat plate,
 - (a) arranged upon the casing and having
 - (b) a central opening surrounding the inner pole piece
 - (c) and spaced evenly therefrom.
5. Means within the casing for retaining said pole pieces in spaced relation (e. g. a spacing ring).
6. *A sound box,*
 - (a) *carried by the casing,*
 - (b) *said sound box including a diaphragm.*
7. A movable coil (i. e. voice coil),
 - (a) rigidly connected to the diaphragm
 - (b) and arranged within the space between the two pole pieces.

There are two elements in this claim which are not found in the appellees' structure. One such element is specified as:

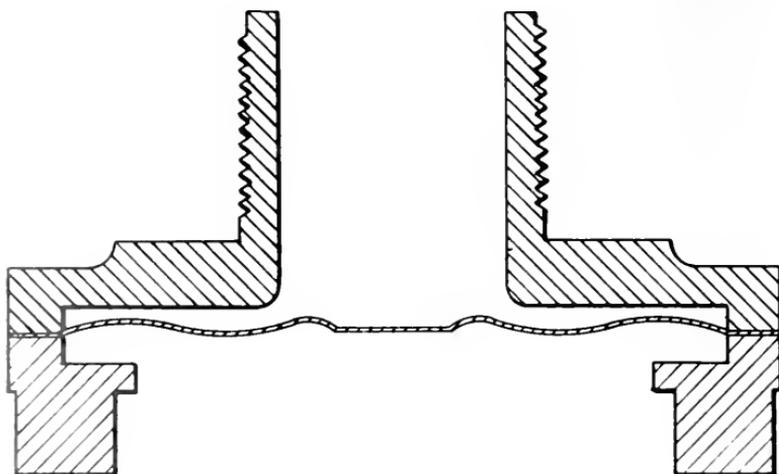
“a sound box carried by the casing, said sound box including a diaphragm.”

The second is

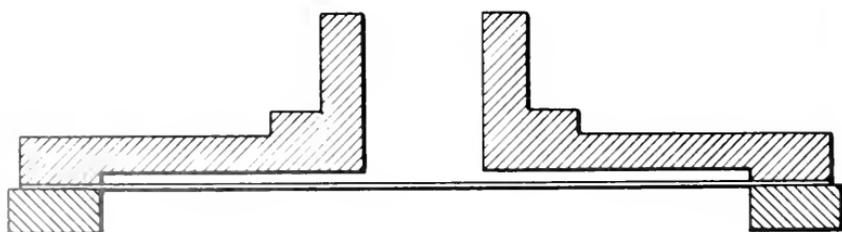
“a core for the coil (i. e. the magnet coil) extending from the bottom of the casing to the top thereof *and formed at its upper end with an inner pole piece.*”



SOUND BOX OF FIG. 2
PATENT NO. 1,448,279.



SOUND BOX OF FIG. 4
PATENT NO. 1,448,279.



SOUND BOX AND DIAPHRAGM.

It will be noted that the sound box is described as "including a diaphragm." This means that the diaphragm is contained in the sound box as a part thereof. In fact, it forms the bottom of the box. The rest of the box consists of a top with a small hole in it for insertion either of a horn or ear tubes, and a surrounding cylindrical wall. The diaphragm, which forms the bottom of the box, is a thin circular metallic plate rigidly attached at the periphery between clamping rings or blocks. In Fig. 4 this diaphragm is shown as having a smooth face, while in Fig. 2 it is shown as corrugated.

The two cuts on adjoining page show the two forms. They are taken from Figs. 2 and 4 of the patent drawings, omitting all parts except sound box and diaphragm.

Attached to the center of the diaphragm, on its under side, is a voice coil consisting of fine wire wound on a spool and vibrating in an annular air gap. When the voice coil functions, the diaphragm vibrates from the center towards the circumference. In this construction, vibrations of the diaphragm propagate sound waves within the sound box, and, by reason of the small confined area within the box and the irregular contour thereof those sound waves become highly compressed and distorted, in which form they do not faithfully reproduce the original sound waves impinging against the diaphragm. That distortion must be corrected and the distorted waves brought back to their original form before they become faithful reproductions. There is no means disclosed in the

patent for doing that, but in the actual use of the Pridham and Jensen device a large, flaring-mouthed horn is attached in the opening at the top of the box, through which opening the distorted sound waves pass. When they pass through the horn and are discharged from the flared end thereof into free air, the distortion is corrected by the release of pressure and they then become faithful reproductions of the originals. A horn or other amplifier is necessary for this purpose. Without it the device depicted in the patent is without utility. A horn is not shown in the patent, but in actual practice appellant uses a horn.

The appellees have discarded the sound box and its enclosed diaphragm, and use a cone made of stiff paper or analogous material. The cone is cut off transversely at its apex and provided with an extension or hub, around which fine wire is wound to constitute a voice coil. To the large end of the cone is attached a flexible rim, made of cloth or other similar material, and this is attached to and supported by a rigid frame or spider. By this construction the cone is flexibly mounted and vibrates as a whole like a piston.

In *Lektophone Co. v. Western Electric Co.*, 16 Fed. (2d) 12, Judge Manton called the bodily motion of such a cone a "plunger action."

The piston-like vibrations of the cone propagate sound waves in the free air space within the cone, which sound waves are self-sustaining and perfectly formed *ab initio*, and, therefore, do not need any rectification. They are analogous to the sound waves produced by a gong in free air. In fine, they are self-

sustaining sound waves propagated initially in free air as distinguished from compressed and distorted sound waves propagated in a closed chamber and subsequently conveyed out of the chamber by a horn and rectified. This latter operation is roughly analogous to the compression of a piece of soft rubber and its subsequent expansion on release of the pressure.

The Hopkins Patent No. 1,271,529, applied for in 1913 and issued in 1918, appears to be the first in the art to show a paper cone flexibly suspended from a rigid frame. That was so adjudged by the 3d Circuit Court of Appeals (Buffington, Woolley and Davis, Circuit Judges) in the case of *Lektophone Corporation v. Brandes Products Corporation*, 20 Fed. (2d) 156, where it was said:

“To our minds, Hopkins was the first to make the combination of a conical shaped paper device of proper size, provided with flexible edges coupled to a rigid frame used in free air.”

This fundamental distinction between these two methods is well established in the art. Thus, in the Hopkins patent, 1,271,529, applied for in 1913 and issued in 1918, it is stated on page 1, lines 12-26:

“This invention relates to instruments which reproduce sounds; and is particularly directed to the attainment of a *direct propagation, in free air*, from a record or equivalent element subjected to the action of the original sound waves or vibrations, of *self-sustaining sound waves substantially corresponding in intensity and amplitude, as well as in pitch or timbre, to the said original sound waves*, as distinguished from an *initial generation of violent air disturbances in a confined*

space, and a subsequent transformation of such disturbances into self-sustaining sound waves by means of a megaphone, horn, or other amplifier."

And on page 1, at lines 86-94, in describing the essential characteristics of the cone, which he calls a "tympanum," Hopkins says:

"* * * the latter" (meaning the tympanum) "excites directly in the free air surrounding it, sound waves of an intensity and amplitude substantially corresponding to the original sound waves. *In other words, the original sounds are directly regenerated by the vibrating tympanum without the interposition of a restrictive or sound modifying transformer."*

In his specification he states that in the sound box method the sound waves in the box become distorted by reason of their compression in a restricted area, and that the object of his invention is to produce sound waves in free air "without interposition of a confined body of air and without the employment of a restrictive transformer, such as a horn." (p. 1, lines 70-73.)

Judge Thatcher said in *Lektophone v. Western Electric*, 20 Fed. (2d) 151:

"Hopkins discarded the sound box and horn and successfully developed a sounding board directly radiating sound waves in unconfined air."

This distinction was pointed out by the Supreme Court in the case of *Lektophone Corporation v. Rola Co.*, 282 U. S. 168, affirming the decision of this Court in 34 Fed. (2d) 764.

These cases conclusively hold that the methods of producing sound waves through the instrumentality of a free air cone on the one hand and a sound box and diaphragm on the other are radically different things and consequently they are not equivalents.

MECHANICAL EQUIVALENTS.

The contention of appellant is that the appellees' open-topped, truncated paper cone and the rigid open frame or spider to which it is loosely attached by a flexible joint, are the mechanical equivalents of the sound box and diaphragm shown in the Pridham and Jensen patent. That is to say, the frame or spider is the sound box and the cone is the diaphragm. This contention cannot be sustained.

For two things to be equivalents, they must both accomplish the same result in substantially the same manner or mode of operation and by substantially the same mechanical means. There must be substantial identity of *means*, identity of *operation* and identity of *result*.

The sound box of the patent is a truly *box-like* structure having a top and bottom and surrounding circular wall, while the device of the appellees, which is said to be the equivalent of this sound box, is nothing more than an open frame or spider to which the cone is attached by a flexible rim at the bottom—in fine, a support for loosely hanging a vibrating cone thereon.

A peg in a wall for hanging hats on is not the equivalent of a hat box.

In the case of *Hardison v. Brinkman*, 156 Fed. 967, the Court of Appeals of this Circuit, through Judge Gilbert, said:

“A mechanical equivalent which may be substituted for an omitted mechanical element in a combination claim is one that *performs the same function* by applying the *same force* to the same object through the *same means and mode of application.*”

In the instant case the sound box method accomplishes the result of producing *imperfect, compressed and distorted sound waves* in a restricted chamber or “box,” which waves are of no value unless they are subsequently rectified; whereas the vibrating cone accomplishes the result of producing *initial self-sustaining sound waves in free air*, which need no rectifying and are of great value. These two results are not the same, but wholly different.

Also the method of accomplishing the result is different in each case. In the sound box construction the method is to *vibrate a stationary, circular metal diaphragm from center to circumference, with the circumference rigidly attached between two rings*; whereas in the vibrating cone structure the method is to vibrate the cone *as a whole* like a piston, and with the outer end of the cone having a flexible joint to admit of the piston movement.

Of course, the mechanical structures of the two devices are radically different. The diaphragm of the

patent is a circular, metal plate rigidly fastened at its periphery between two rings vibrating from center to circumference, while the so-called diaphragm of the vibrating cone construction is a truncated cone made of paper or like material, being cut off transversely at its upper end and provided with a flexible rim at the lower end, connecting with a rigid frame or spider, and vibrating as a whole.

In *Lektophone Corporation v. Rola*, 282 U. S. 168, the Supreme Court held that a free air cone "is distinguished from the then prevailing use of a sound box and horn," and that the contribution of Hopkins comprised "abandoning the sound box." Since appellees use such a free air cone as is there referred to, the case is authority for our contention that appellees' cone is a different thing from the sound box and horn of Pridham and Jensen.

There is no identity of *means*, no identity of *operation*, no identity of *result*. Hence there can be no equivalency.

ORAL EVIDENCE IN RE SOUND BOX.

But irrespective of the foregoing considerations, what is the oral evidence on this subject? Dr. Paul E. Sabine, of Geneva, Illinois, an acoustical expert, gave a deposition for defendant in the Hart & Reno case (No. 2534), tried contemporaneously with the case at bar, and a copy of such deposition was stipulated herein. Beginning on page 191 of the Record he testified as follows:

“My training and experience tending to qualify me to explain to the Court acoustical devices and their operation, is this: I am a graduate of Harvard University. I have taken my Doctor’s degree in physics. I was for two years assistant professor in physics at the Case School of Applied Science. For the last 12 years I have been director of acoustical research at the River Bank Laboratories. I am a member of the American Physics Society and the Acoustical Society of America. I have devoted 12 years to research on problems in sound. I am the author of numerous technical papers on acoustical questions and have had 12 years’ experience as a consultant.

I have read Pridham and Jensen patents Nos. 1,448,279 and 1,579,392, the patents in suit. I understand the construction and operation of the electrodynamic receivers illustrated and described in said patents. (The term ‘sound box’ is used in the said two patents.) That term is well known in the acoustical art.

The term ‘sound box’ arose in connection with the development of the phonograph and as employed in the phonograph art it refers to a small cylindrical box, one side of which is the diaphragm or other moving vibrating member, the other side being closed except for an opening usually terminating with a tubular extension to which the horn of the phonograph is attached. This nomenclature has subsequently in the development of loud speakers come to be used quite generally with a similar meaning except in the loud speaker the diaphragm is operated, not by a needle as in the phonograph, but by the electrical currents which are supplied to the loud speaker.”

The witness was asked if he could cite any books of reference as authority in support of his definition of a sound box. He answered "yes" and gave the following (R. pp. 192-3-4):

- The International Encyclopedia, 1918 Edition, in the article on phonographs;
- Dayton C. Miller's Science of Musical Sounds, published in 1916;
- Encyclopedia Britannica, in an article on gram-aphones;
- Article by C. R. Hanna, in the Journal of the Acoustical Society of America, October, 1930;
- Article by Maxfield and Harrison, in the Bell System Technical Journal for July, 1926;
- Journal of American Institute of Electrical Engineers, 1924, by Hanna and Slepian.

On page 194 he gave the following testimony as to the operation of a sound box:

"Q. 10. How does a sound box operate acoustically?"

A. The sound box is a small almost wholly enclosed chamber. As I have stated, one side of it is connected with the member which produces vibrations of the diaphragm. One side of it is the diaphragm. And the movements of the diaphragm back and forth alternately contract and expand the volume of this chamber and the enclosed air and these volume changes are accompanied by pressure changes in the enclosed air. The smaller the volume of the box the greater will be the pressure change for a given displacement of the diaphragm.

Q. 11. When a horn is used in connection with the sound box what is the resulting acoustical operation?

A. The large pressure changes in the sound box would not necessarily result in any considerable volume of sound. In order to utilize these large pressure changes as sound a considerable volume of air has to be set into vibration and the air cavity or the air enclosed in the sound box which is subjected to these large pressure changes connects directly through the throat of the horn with a larger volume of air with an expanding cross-section as the horn expands and these large pressure changes operate directly on the air enclosed in the horn to produce vibrations in that column of air. This column of air may be vibrated as a whole, in which case the horn is emitting its fundamental tone, or it may vibrate in parts. As the diaphragm advances, decreasing the volume of the air enclosed in the sound box, it sets up a pulse of condensation in the air and the air is forced out under pressure into the horn. This movement is transferred through the expanding section of the horn and is finally radiated from the mouth of the horn as sound over a large area. In other words, the combination of sound box and horn act as a means of acoustically coupling the stiff, rather small, dense diaphragm, with a large volume of much lighter and much less dense air at the mouth of the horn. The combination serves as a means of acoustically coupling and corresponds to the impedance matching in electrical circuits where you want to transfer energy of oscillating current from one part of that circuit to another most efficiently. The sound box and horn increase the efficiency of the diaphragm as a sound producer.

In the said Pridham and Jensen patents the term 'sound box' is used in the sense in which I

have just defined it and I think it is properly used.

Q. 13. Mr. Edwin S. Pridham, one of the joint patentees of the two patents in suit, in his deposition in this case stated on page 15 that in the case of loud speakers the term 'sound box' 'can be used as a supporting medium or enclosure to support the diaphragm. There are many definitions of the word "sound box." It is not restricted to any particular or definite type of apparatus.' Do you agree with the said statements of Mr. Pridham?

A. I do not agree with Mr. Pridham on that in the light of the quotations which I have already made or the authorities which I have already cited.

The term 'sound box' does refer specifically to an enclosure and, moreover, engineers recognize the fact that this enclosure does form and the size of the opening does play an important acoustical function in the operation of the loud speaker device. So that any frame that holds the diaphragm cannot be properly spoken of as a sound box unless it fulfills the functions which I have already indicated as the function of the sound box. I think the current literature bears that out, as well as the literature of the phonograph art in general." (R. pp. 195-6.)

DEPOSITION OF CLAIR L. FARRAND.

Mr. Clair L. Farrand, of New York, president of the United Research Corporation, a company engaged in electrical and acoustical work, gave a deposition for defendant in the Hart & Reno case, and a copy of

same was stipulated into the case at bar. (R. p. 231 et seq.) He secured a British patent, No. 178,862 (Deft's. Ex. EE) and later a U. S. patent No. 1,847,935, dated March 1, 1932, but applied for April 23, 1921. He gave testimony as follows:

“In 1921 I manufactured a so-called Phonetron loudspeaker. This was a moving coil-driven cone type loudspeaker and was sold in moderate quantities for radio amateur uses, as this was prior to the days of the broadcasting reception. I am the patentee of British patent No. 178,862 granted to Clair Loring Farrand.” (R. p. 232.)

“* * * The structure shown in this patent is practically identical with the structure marketed by me in 1921. The only difference I see is in the method of fastening the spider support of the cone to the central magnetic pot. The term used to describe this type of speaker is the word ‘dynamic.’ It is an abbreviation of the technical term electro-dynamic.” (R. p. 233.)

“A dynamic speaker, as I understand, comprises a conical diaphragm of rather large size, acting directly upon unconfined air and made of light material, supported at its outer edge with a flexible support in an opening in some supporting structure.

Mounted on the center of the conical diaphragm is a voice coil, which floats in a long annular gap, wherein there is a unidirectional magnetic field produced by a field winding which in turn is energized from a separate source. The voice coil is energized by the audio voice frequency currents received from the associated amplifier tubes. The diaphragm is generally supported in a baffle, which may conveniently be an opening in one wall of a radio cabinet.

I have examined Plff's. Ex. C, which is a photostat showing the cross section of the Stewart-Warner loudspeaker complained of in the present suit, and understand the construction as shown in the drawing.

I am generally familiar with the horn type loudspeakers of the sound box and diaphragm type which were on the market for many years. The General Electric Company, Radio Corporation and Westinghouse Companies marketed speakers of that type for radio broadcast reception but they are not being marketed now. The reason they are not being marketed is that it is possible to obtain a superior musical reproduction with the dynamic type loudspeaker.

I am familiar with the differences in construction and principle of operation of the dynamic cone type loudspeaker and the sound box diaphragm and the horn type of loudspeaker. The differences are these:

The sound box and horn type loud speaker comprises an actuating motor element generally fastened to a small flat diaphragm which forms one wall of an enclosed chamber called a sound box. The opposite wall of this chamber has a small opening, to which is fastened the throat of a horn. The walls of the horn taper outwardly to a bell-like opening, the size of which is dependent upon the lowest tone it is desired to reproduce. The action of this device is that the diaphragm, moving small distances, compresses the air in the chamber of the sound box to a very high degree of compression. This high compression wave is applied to the throat of the horn and expands outward toward the bell-like opening, and as it expands outwardly its pressure is reduced, due to the increasing area, until when

it arrives at the opening of the horn it is a relatively low pressure air wave.

On the other hand, the dynamic type loud speaker does not employ the horn. The conical diaphragm operates directly on the air at approximately the same pressure as is arrived at at the bell opening of the horn in the case of the sound box-horn combination." (R. pp. 234-5.)

He was then asked if the Stewart-Warner device shown in Exhibit C contains a sound box and diaphragm in the sound box. (This testimony was given in the suit of *Magnavox v. Hart & Reno*, and the Stewart-Warner speaker referred to is of the same construction and mode of operation as the appellees' speaker in the present case.) His answer thereto was as follows:

"A. The speaker of Plaintiff's Exhibit C does not contain a sound box. It does have a conical diaphragm, and from its design is for use directly upon unconfined air without the use of a horn. Sound boxes generally are used with horns." (R. p. 236.)

As the appellees' speakers are substantially of the same construction and mode of operation as the Stewart-Warner (Exhibit C), this testimony is applicable and as such has been stipulated into the case at bar.

In opposition to this, plaintiff produced as witnesses Edwin S. Pridham and Herbert E. Metcalf. Neither of them is a disinterested witness. Mr. Pridham is the head and front of The Magnavox Com-

pany, its chief owner and stockholder. Mr. Metcalf was for eight years an employee and stockholder of The Magnavox Company and his testimony is not free from bias.

Under these circumstances, the testimony of Pridham and Metcalf must be viewed with caution, and cannot prevail over that of Dr. Sabine and Mr. Farrand, both disinterested witnesses.

KELLOGG PATENT NO. 1,707,617.

This patent was applied for on January 9, 1925, and issued on April 2, 1929, to General Electric Co., as assignee of Kellogg. A full description of the device is also found in an article published by the Journal of the American Institute of Electrical Engineers, September, 1925, entitled "Notes on the Development of a New Type of Hornless Loud Speaker." (Deft's. Ex. CC.) It is an interesting history of the development of the present day loud speaker and we bespeak a careful reading thereof.

In our little Blue Book is a reproduction of Fig. 1 of the Kellogg patent having certain parts colored. Appellees' loud speaker is in substance the same thing. Claim 1 of this Kellogg patent reads as follows:

"In an apparatus for sound reproduction, a diaphragm having the form of a truncated cone which is open at its top and which is so supported that it is adapted to vibrate substantially as a whole, and means for actuating said diaphragm comprising a coil surrounding the top thereof."

This claim is fundamental and generic. It covers all the modern cone type speakers now in use in the United States, including the present Magnavox commercial loud speaker. It dominates the modern art of conical loud speakers.

Two conclusions follow from the issuance of this Kellogg patent:

First, it negatives the theory that a flexibly supported free air cone is the equivalent of a sound box rigid-diaphragm construction.

Second, it raises a presumption of non-infringement on Pridham and Jensen.

As to the first proposition, the primary purpose for which we use the Kellogg patent is to show that the Kellogg construction, which is also our construction, *is a radically different thing* from the Pridham and Jensen construction, and *ex proprio vigore* not a mechanical equivalent. It is an independent creation, so ruled by the Patent Office and claimed in the most generic language. It is so radically different from the Pridham and Jensen device in construction, and mode of operation, that it appears to us as a travesty on logic to contend that it is the same thing as the Pridham and Jensen device. Two different things cannot be the same thing.

As to the second proposition announced, viz.: presumption of non-infringement, the law on this subject is settled in this circuit by decisions of the Supreme Court and of this Circuit Court of Appeals for the Ninth Circuit.

In *Boyd v. Janesville Tool Co.*, 158 U. S. 261, Mr. Justice Strong, quoting from another case, states the law as follows:

“The grant of the letters patent” (the subsequent one) “was virtually a decision of the Patent Office that there is a substantial difference between the inventions. It raises the presumption that according to the claims of the later patentees, this invention is not an infringement of the earlier patent.”

This rule of law was recognized by this Court in *Western v. Layne*, 276 Fed. 472, and became firmly established in this circuit by the case of *Weaver v. American Chain Co.*, 9 Fed. (2d) 372, where the decision of the Court was announced by Judge Morrow in the syllabus as follows:

“Action of Patent Office in allowing patent is in effect ruling that it does not infringe prior patent, and is entitled to great consideration in suit for infringement.”

That decision is the latest pronouncement on the subject by this Court. Therefore, it settles the law on the point in this circuit.

**APPELLANT ESTOPPED BY ITS OWN ACTS FROM CLAIMING
THE VIBRATING CONE TO BE THE MECHANICAL
EQUIVALENT OF THE SOUND BOX HORN CONSTRUCTION.**

Up to 1927-8 appellant was marketing as its commercial device the sound box diaphragm construction shown in the Pridham and Jensen patent No. 1,448,279, but at that time discontinued the same and

adopted the Kellogg construction of vibrating free air cone, which was then universally used by practically all manufacturers of radio loud speakers. Since that time the cone construction has been and is now being used by appellant, and according to Pridham a million of them have been sold by appellant. (R. p. 351.) In and by its present commercial loud speaker, appellant practically copied the vibrating cone which was designed by Kellogg and put on the market as early as 1925, and which is fully described and claimed in the Kellogg patent.

Under such circumstances, an estoppel arises. Actions speak louder than words, and the actions of appellant in this regard belie its words. Abandonment of the sound box horn construction and adoption of the Kellogg vibrating cone construction is practically an admission that the latter is not the same thing as the former. Our precise point is that Kellogg's vibrating cone is a wholly different thing from Pridham and Jensen's sound box diaphragm construction and hence there is no infringement.

Greaves Interference.

But this is not all. On March 6, 1928, Magnavox Co., through one of its employees, Valentine Ford Greaves, and by its present attorneys, filed an application in the Patent Office for a patent on the identical device shown and claimed in the Kellogg patent, and that application was assigned to and prosecuted by Magnavox. An interference was promptly declared between the Greaves application and the Kellogg patent.

The facts of this interference appear in the Interference Record, Defendants' Exhibit GG.

When the interference came on for hearing in the Patent Office upon a motion by Kellogg to dissolve the same on the ground that the subject-matter was fully described in an article published in September, 1925, by Kellogg and another, entitled "Notes on Development of a New Type of Hornless Loud Speaker" (Deft's. Ex. CC), neither Greaves nor anyone on behalf of Magnavox appeared at the hearing, but defaulted and abandoned the entire field to Kellogg. Thereupon the Examiner of Interferences dissolved the interference on the ground that the Kellogg publication of 1925 disclosed the invention more than two years prior to the Greaves application, and hence was a statutory bar against Greaves.

These facts fortify our contention made *supra* that the vibrating cone construction is a different thing from the Pridham and Jensen sound box, diaphragm construction, and hence that there is no infringement.

There is still another reason why it must be held that the free air cone is not the same thing as the sound box.

In *Lektophone v. Rola*, 34 F. (2d) 764-766, this Court said:

"That which infringes, if later, would anticipate, if earlier."

Applying this rule, if the vibrating free air cone of appellees, which is substantially the same vibrating free air cone of Kellogg, be an infringement, as urged by appellant, then the Pridham and Jensen patent

would be invalid for anticipation, because that free air cone was an earlier device. We see no escape from this conclusion.

DETACHABLE INNER POLE PIECE.

Claim 8 of patent 1,448,279 also specifies as an element:

“* * * a core for the coil” (that is the magnet coil) “extending from the bottom of the casing to the top thereof *and formed at its upper end with an inner pole piece.*”

On referring to the drawings and specification of the patent, it will be seen that this inner pole piece is separate and detachable from the magnet coil. Figs. 2 and 3 of the patent are reproduced on the adjoining page, where the detachable inner pole piece is colored orange. This detachable pole piece is designated in the drawings by the numeral 12, and is formed by boring out the upper end of the iron core 17 (colored blue) of the magnet, so as to form a cavity or pocket, and then inserting therein the stub or short piece of iron 12, which is the inner pole piece called for by the claim. The specification says (p. 1, lines 36-8):

“The iron core 17 of the magnet coil 16 is bored out to form a seat for the pole piece 12 so as to make a good magnetic contact.”

It will be seen that this inner pole piece of the claim is a separate and independent element, detachable from the iron core of the magnet. It is held in place by the spacing ring 11 and by being attached

Fig. 2.

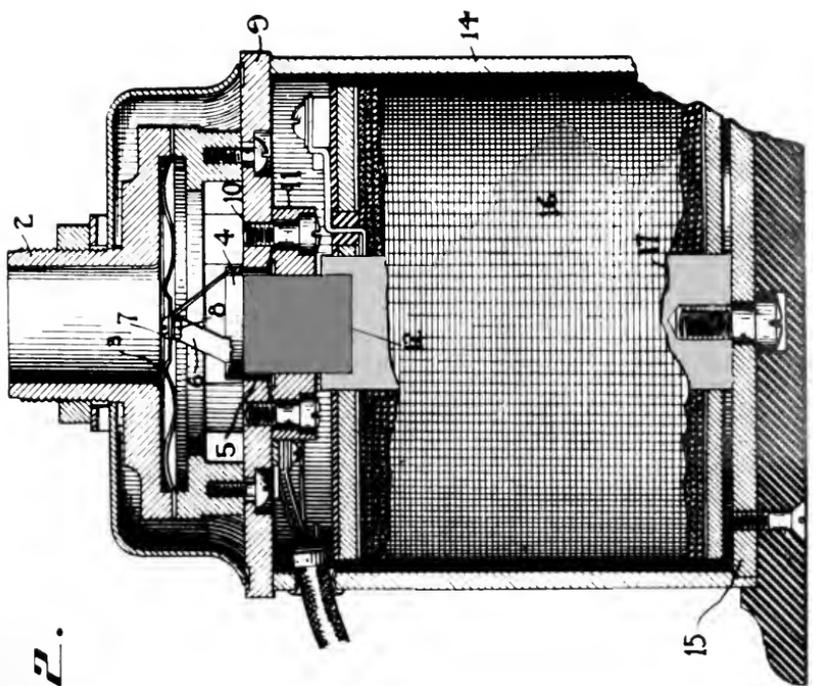
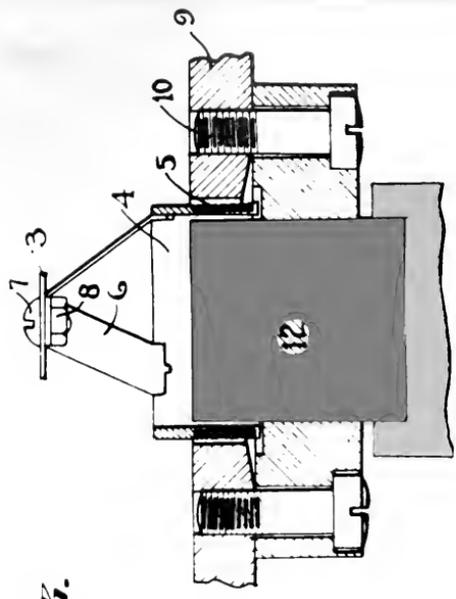


Fig. 3.





to the receiver head, so that it will go with the receiver head when the receiver head is disassembled from the magnetizing structure. It is not integral with the magnetizing structure, but is a part and parcel of the receiver head.

This construction is of the essence of the invention, so far as claim 8 is concerned.

One fundamental idea of the patent, as gathered from the specification and drawings, is that it consists of two separate units, called respectively (1) *a receiver head* and (2) *a magnetizing structure*, made separately but intended to be superimposed the one upon the other, or removed the one from the other at will. One unit may be made in New York, and the other in San Francisco, and then the two may be assembled in Chicago or anywhere else. This idea runs all through the specification.

On page 1, line 58 et seq., of the specification, it is said:

“The pole piece 12 is of substantially the same diameter as the inside diameter of the spacing ring 11. The pole piece is held securely in position in the spacing ring 11 by means of set screws 13-13.”

On page 1, line 76 et seq., the specification says that the receiver head is:

“* * * the name given to the sound box diaphragm, coil, and upper pole piece, * * *.”

The upper pole piece here referred to is the stub or extension 12.

On page 1, line 64 et seq., it is further said, referring to the receiver head:

“The assembly is then *a unit* and can be placed on any magnetizing structure designed for it.”

On page 1, lines 74-5, it is said that the receiver head, including sound box, diaphragm, and coil, may be removed as *a unit* from the magnetizing structure.

On page 1, line 86 et seq., it is said that the magnet core is bored out to form a seat for the pole piece 12, and then follows this statement:

“It will be seen that the receiver head can be assembled as a unit apart from the magnetizing structure and can be placed on or removed from any magnetizing structure adapted to receive it.”

On page 2, beginning at line 12, it is said:

“* * * the inner pole piece is securely fastened to the spacing ring. Thus we have a unit assembly of sound box with its diaphragm and coil, outer pole piece and inner pole piece all in correct relation and ready to be mounted on the magnetizing structure.”

On page 2, beginning at line 29, it is said:

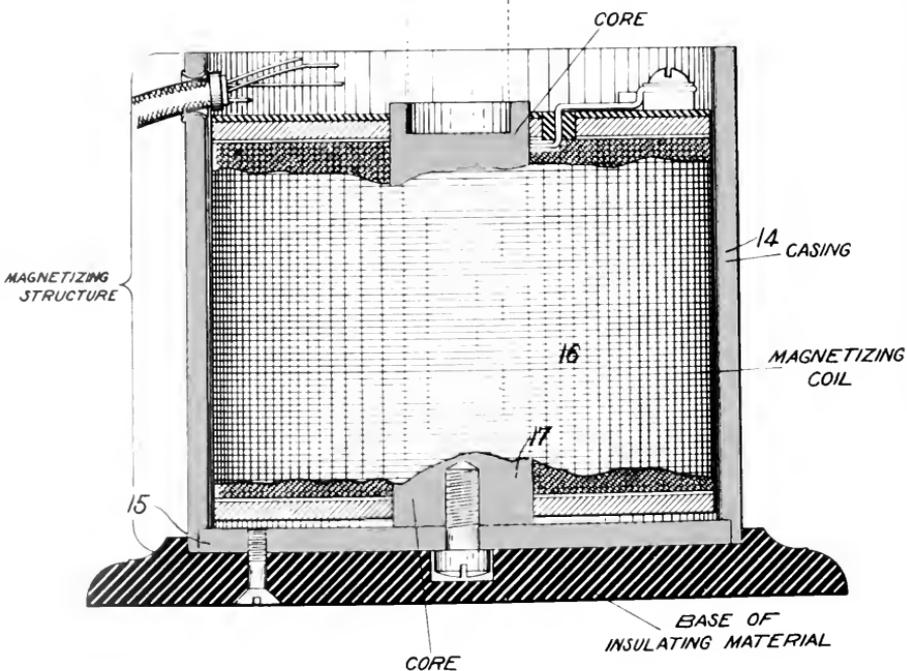
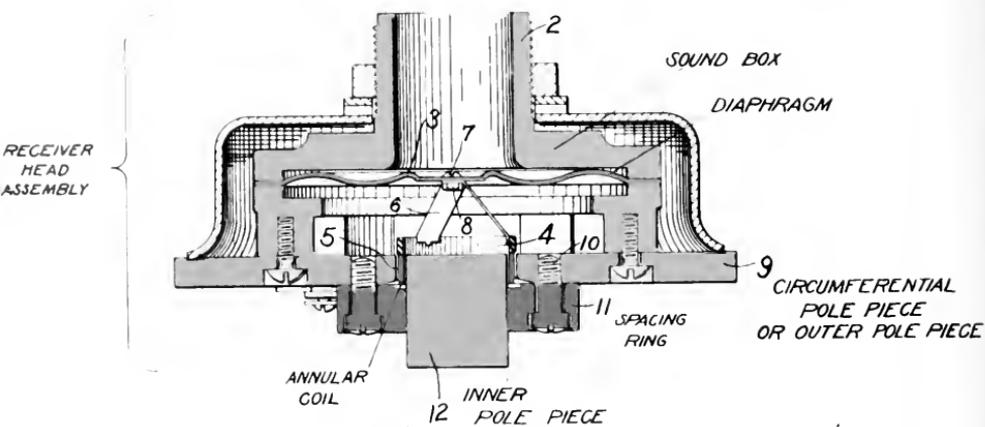
“We have also found it to be advantageous to construct the inner and outer pole as a unit with the sound box and movable coil so that they can be placed or removed as a unit on the magnetizing structure. In this way a receiver head or unit, as the assembly of inner and outer pole pieces with the sound box and movable coil is termed, can be fitted to any magnetizing structure (such as a permanent magnet or electro-magnet) for which it has been designed.”

On page 2, lines 41 et seq., it is said:

“The inner pole piece is rigidly held in fixed relation to the outer pole piece by means of the



STRUCTURE OF PATENT 1448279
 SHOWING RECEIVER HEAD ASSEMBLY DETACHABLE AS A UNIT
 IN ACCORDANCE WITH THE SPECIFICATION AND CLAIMS.



COLOR LEGEND

 Vibrating Coil

 Diaphragm

 Magnet

 Spacing Ring

 Sound Box

spacing ring 11. When this spacing ring has been fixed in proper relation to the outer pole piece, its inner diameter is such that the inner pole piece is held in proper relation to the outer pole piece and the air gap is fixed. The inner pole piece is held rigidly in the spacing ring by means of set screws.”

And summarizing the situation, beginning on line 66, page 2, the specification says:

“The construction is such as to permit ease of assembling and adjusting and fixing the relation of the pole pieces to the movable coil. It permits of flexibility in manufacturing operations, as the receiver head and the magnetizing structure may be completed independently and then assembled to form the complete unit.”

It will thus be seen that the Pridham and Jensen device is a two-unit structure. One unit is the *receiver head* and the other the *magnetizing structure*. The inner pole piece 12 is a part and parcel of the receiver head and goes with the receiver head when the receiver head is lifted from the magnetizing structure. Great advantages are claimed for this mode of procedure.

On the adjoining page is a drawing showing the two units separate and detached. We have simply lifted the receiver head from the magnetizing device.

The appellees' structure has no detachable inner pole piece 12 nor any equivalent thereof. Hence there is no infringement of claim 8.

If claim 8 can be sustained at all, it can only be by inclusion therein of the detachable inner pole

piece 12 as an element. In that respect the combination seems to be novel, as we have not found a detachable inner pole piece in the prior art. But, whether novel or not, we do not use it.

In this regard Pridham and Jensen seem to agree with our contention, for in an argument filed by them in the Patent Office relative to certain claims embodying the feature under consideration they said:

“Claims 1, 2, 3, 4, 5 and 6 specify a receiver head assembly which includes pole pieces to *detachably fit upon a magnetizing structure*. This affords a convenient method of assembling the device and is not shown in the patents of record. None of the references shows an assembly of the sound box and pole pieces *separable from the magnetizing structure*.” (Argument attached to Amendment A, Paper No. 3, filed Nov. 28, 1921, as appears in File Wrapper Contents, Deft's Ex. AA.)

CLAIM 8 OF PATENT NO. 1,448,279 LIMITED TO THE DETAILS OF CONSTRUCTION SHOWN AND DESCRIBED IN THE PATENT.

In the lower Court we contended that this claim was void for want of invention, relying upon the following decisions of this Court:

Ray v. Bunting, 4 Fed. (2d) 214;
Elliott v. Smith, 50 Fed. (2d) 816;
Day v. Doble, 42 Fed. (2d) 6.

As an alternative proposition, we argued further that even if the claim was not absolutely void, it was so limited and restricted by reason of the state of the

art that there could be no infringement, and in that behalf we relied upon

Kokomo v. Kitselman, 189 U. S. 8;

Hardison v. Brinkman, 156 Fed. 967;

Day v. Doble, 42 Fed. (2d) 6.

In deciding the case the judge of the trial Court adopted the alternative proposition *supra*. In other words, assuming the validity of the claim for the purposes of the argument, said claim is of such narrow and restricted scope that there could be no infringement. (R. p. 68.)

All we have to do in order to maintain that defense is to point out the prior art upon which we rely and the Court will see that the invention is not of a primary character, but merely an improvement and must be limited to the specific details shown, and as those specific details are not found in the appellees' structure, there is no infringement.

DETAILS OF CONSTRUCTION IN PRIDHAM AND JENSEN
PATENTS NOT FOUND IN APPELLEES' MACHINE.

It is thoroughly well settled that where an invention is a narrow one residing in details of construction, the claim must be limited to said details of construction shown and cannot be extended under the doctrine of mechanical equivalents to cover other details of construction not shown.

Perhaps as pat and pertinent a statement of the law as can be found is the language of this Court, through the late Judge Ross, in the case of *Eaid v. Twohy*, 230 Fed. 447:

“In view of the state of the art as disclosed by the foregoing patents, the contention that the McConnell patent is a pioneer one, and therefore entitled to the broad construction to which the latter are rightly entitled, does not, in our opinion, merit discussion. Being a mere improvement on the prior art, McConnell is only entitled to *the precise devices described and claimed* in his patent, and if the devices embodied in the Chandler patent can be differentiated, it is clear that the charge of infringement cannot be maintained. Such is the well-established law.” (Citing cases.)

This language is quoted and approved by this Court in the recent case of *International Harvester v. Killefer*, 67 Fed. (2d) 60.

Other decisions of this Court on the point are:

Simplex Window Co. v. Hauser, 248 Fed. 919 (926);

Stebler v. Porterville, 248 Fed. 927 (930);

Pacific States Electric Co. v. Wright, 277 Fed. 758;

Overlin v. Dallas, 297 Fed. 12;

Wilson v. Union Tool Co., 249 Fed. 734.

APPELLEES' BLUE BOOK SHOWING STATE OF THE ART.

For convenience of references we have prepared a pictorial digest of the prior art enclosed under a blue cover, and for that reason styled by us the “Blue Book.” We are handing in with this brief copies of the same for aiding the Court and saving labor. It

gives a birdseye view of the prior art in colors and saves the necessity of a detailed description.

This Blue Book shows that the sound box with its diaphragm was disclosed in the following:

U. S. patent to Alexander Graham Bell, No. 186,787 of 1877 (Deft's Ex. C; Blue Book p. 3);

British patent to Siemens, No. 4685 of 1877 (Deft's Ex. E; Blue Book p. 4);

U. S. patent to Cuttress and Redding, No. 242,816 of 1881 (Deft's Ex. F; Blue Book p. 5);

U. S. patent to Milliken, No. 262,811 of 1882 (Deft's Ex. H; Blue Book p. 7);

Fig. 5 of Electrician publication of 1899 (Deft's Ex. K; Blue Book p. 9);

French patent to Oliver, No. 404,286 of 1909 (Deft's Ex. Q; Blue Book p. 13);

U. S. patent to Johnson, No. 1,075,786 of 1913 (Deft's Ex. T; Blue Book p. 14, and Ex. KK, Blue Book p. 15).

The annular dynamic coil (voice coil) was shown in the following:

U. S. patent to Siemens, No. 149,797 of 1874 (Deft's Ex. D; Blue Book p. 2);

British patent to Siemens, No. 4685 of 1877 (Deft's Ex. E; Blue Book p. 4);

U. S. patent to Cuttriss and Redding, No. 242,816 of 1881 (Deft's Ex. F; Blue Book p. 5);

U. S. patent to Cuttriss and Milliken, No. 256,795 of 1882 (Deft's Ex. G; Blue Book p. 6);

U. S. patent to Milliken, No. 262,811 of 1882 (Deft's Ex. H; Blue Book p. 7);

- U. S. patent to Mather, No. 387,310 of 1888
(Deft's Ex. I; Blue Book p. 8);
- British patent to Lodge, No. 9712 of 1898 (Deft's
Ex. J);
- Fig. 5 of Electrician publication of 1899 (Deft's
Ex. K; Blue Book p. 9);
- U. S. patent to Pearson, No. 903,745 of 1908
(Deft's Ex. O; Blue Book p. 10);
- French patent to Oliver, No. 404,286 of 1909
(Deft's Ex. Q; Blue Book p. 13);
- U. S. patent to Pollak, No. 939,625 of 1909
(Deft's Ex. P; Blue Book p. 12);
- U. S. patent to Johnson, No. 1,075,786 of 1913
(Deft's Ex. T; Blue Book p. 14 and Ex. KK,
Blue Book p. 15).

Inner and outer pole pieces and devices for spacing the inner and outer pole pieces apart (a spacing ring) were shown in the following:

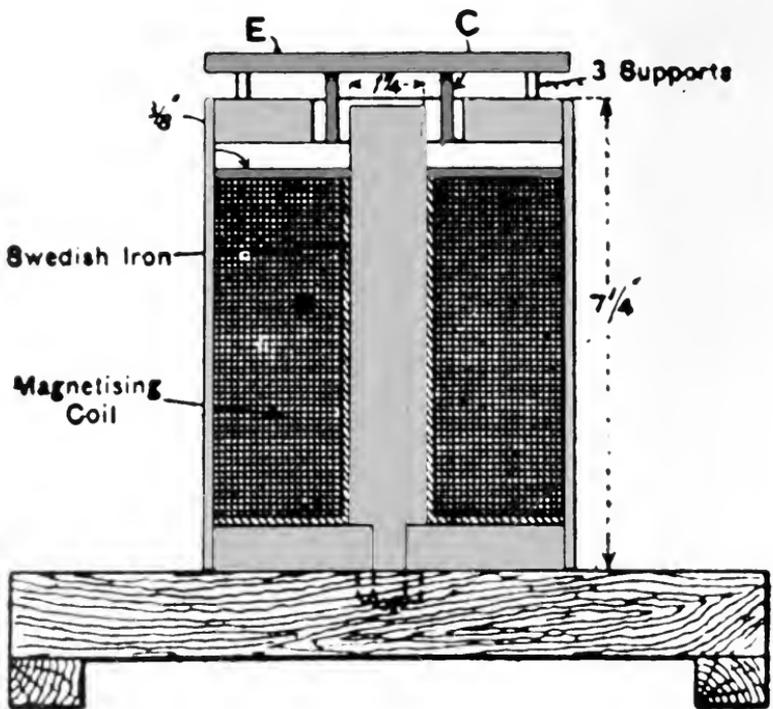
- U. S. patent to Milliken, No. 262,811 of 1882
(Deft's Ex. H; Blue Book p. 7);
- U. S. patent to Mather, No. 387,310 of 1888
(Deft's Ex. I; Blue Book p. 8);
- British patent to Lodge, No. 9712 of 1898 (Deft's
Ex. J);
- Fig. 5, Electrician publication of 1899 (Deft's
Ex. K; Blue Book p. 9);
- U. S. patent to Pearson, No. 903,745 of 1908
(Deft's Ex. O; Blue Book p. 10);
- U. S. patent to Pollak, No. 939,625 of 1909
(Deft's Ex. P; Blue Book p. 12).

It will not be necessary to dwell in detail on all of the exhibits contained in the Blue Book. We be-



FIG. 5 LODGE PUBLICATIONS

ELECTRICIAN JAN. 6, 1899
ELECTRICAL ENGINEER MARCH 2, 1899
(ENLARGED & COLORED)



COLOR LEGEND

()
Vibrating
Coil

()
Diaphragm

()
Magnet

()
Spacing
Ring

()
Sound
Box

lieve the Court will understand them from a glance. Brief reference to a few of them, however, may not be amiss.

The Milliken Patent No. 262,811 of August 15, 1882 (Blue Book p. 7), is particularly important. In fact, it shows all of the elements of Pridham and Jensen. While there are differences in detail, yet they function generically in the same way and produce the same result. No discriminating mind, we contend, comparing it with Pridham and Jensen, can fail to come to this conclusion.

Milliken shows horse-shoe magnets, but in the patent itself he says that electro-magnets may be used, and Pridham and Jensen Patent No. 1,448,279 shows both kinds.

Another interesting exhibit is Sir Oliver Lodge's telephone shown in Fig. 5 of the Electrician publication (Blue Book p. 9), and in British Patent No. 9712 of 1898. This exhibit shows everything except a sound box. Instead of a sound box it shows a flat wooden sounding board, colored green in our illustration.

The purpose of Sir Oliver Lodge was to produce a loud-sounding telephone, one which dispensed with the conventional ear tubes and was audible over an extended area. That this object was successfully accomplished is abundantly shown by the deposition of Sir Oliver and that of his assistant, Mr. Robinson. (See deposition of Robinson, X.Q. 73 (R. bottom of p. 287); 82, 83, 84, 86, 87, 90, R. p. 289); also deposition of Lodge. (R. pp. 303, et seq.) In fact, the re-

production was so loud that Sir Oliver called the device a "bellowing telephone", and mentioned the fact that the ballad "Auld Lang Syne" was sung into the machine in one room and distinctly heard in the adjoining room. (Ans. to Q. 114, R. p. 325.)

Another exhibit worthy of mention is French patent to Oliver, No. 404,286, of November 27, 1909. (Blue Book p. 13.) It is entitled "vibrating coil telephone speaker", and is somewhat similar to Milliken No. 262,811 of August 15, 1882, already considered. (Blue Book p. 7.) It shows every element except a spacing ring; but as said spacing ring applied to a similar construction had been shown many years before in the patent to Milliken, the omission thereof from Oliver is of no moment. So far as concerns Pridham and Jensen's sound box and diaphragm, those things are clearly disclosed in Oliver as well as in many others, notably in the original Bell telephone patent itself, No. 186,787 of 1877. (Blue Book p. 3.)

We also venture to call attention to Siemens' British patent No. 4685 of 1877. (Blue Book p. 4.) This inventor was the original and first inventor of the circular vibrating coil operating in a circular magnetic gap. (See his patent No. 149,797 of 1874; Blue Book p. 2.)

His British patent above noted (4685) shows two forms of the application of his circular vibrating coil to a telephone. One form (Fig. 5) shows a telephone sound box with a flat diaphragm and vibrating coil mounted above the circular magnet poles and with the coil in the circular air gap. The second form

(Fig. 6) shows a similar construction, but instead of a flat diaphragm carrying the coil, it is carried by the truncated end of a small cone X made of parchment of trumpet form very similar to the modern cone type loud speaker.

In view of the foregoing, it is apparent that the Pridham and Jensen patents are of restricted scope and must be limited to the details of construction described and illustrated; or, as ruled by this Court in *Eaid v. Twohy*, 230 Fed. 447, "to the precise devices described and claimed," and as the devices embodied in appellees' structure "can be differentiated, it is clear that the charge of infringement cannot be maintained."

PRIDHAM AND JENSEN PATENT NO. 1,266,988.—CLAIM 8.

This patent was applied for July 3, 1916, and issued May 21, 1918. It has nine claims, but only claim 8 is charged to be infringed.

This invention is entitled "amplifying receiver," and is said to relate to those of the type shown in the prior Pridham and Jensen patent No. 1,051,113, January 21, 1913. Its object is said to be to *simplify and improve the construction and operation of such devices*.

Claim 8 under consideration reads as follows:

"8. In a receiver for telephony the combination with a sound box and its diaphragm, of a magnetic field, a vibrating conducting coil for the telephonic currents disposed in said field, and rigidly secured to the diaphragm and connec-

tions *between said coil and the operating circuit comprising thin metallic strips secured to the diaphragm.*”

Tabulating and separating the elements of this claim, they appear to be as follows:

1. A sound box and its diaphragm;
2. A magnetic field;
3. A vibrating conducting coil for the telephonic currents in said field, rigidly secured to the diaphragm;
4. Connections between said coil and the operating circuit *comprising thin metallic strips secured to the diaphragm.*

We here find our old acquaintances, sound box and diaphragm, already discussed in connection with patent No. 1,448,279. That argument applies with equal force to this claim and need not be repeated. We contend that our device has no sound box or equivalent thereof, and hence there is no infringement.

The third element specified as “the vibrating conducting coil for the telephonic currents” is of wedge shape, as shown by Figs. 3, 4 and 5 of the patent. It differs in form and mode of operation from the vibrating conducting coils shown in the prior art, and also from that shown in the appellees’ device.

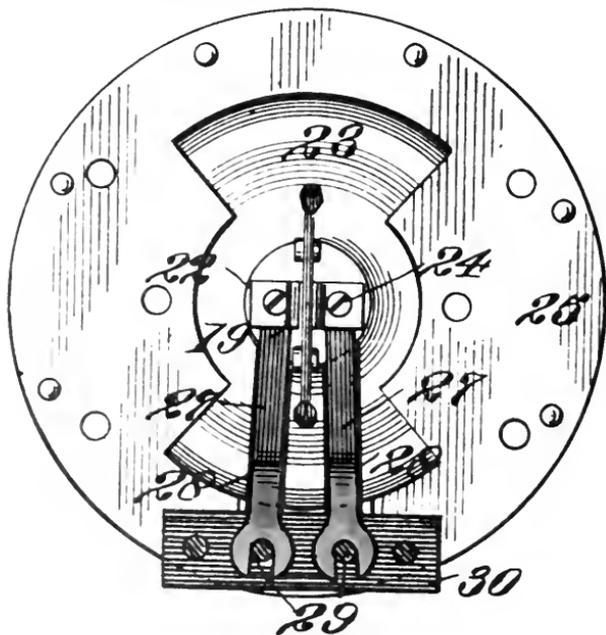
The vibrating coil shown in each of the prior patents disclosed in our Blue Book, with the exception of the Alexander Graham Bell patent No. 186,787, consists of a circular wire coil operating in a

PRIDHAM ET AL PATENT
No. 1266988

FIG. 9.

SHOWING THIN METALLIC STRIPS LEADING ACROSS THE DIAPHRAGM TO THE EDGE THEREOF.

Fig. 9.



circular magnetic gap. This difference from the circular form and mode of operation thereof is fundamental, and for this reason alone it might be argued with force that there is no infringement. In other words, this claim 8 is limited to the wedge-shaped vibrating coil illustrated in the patent. However, it is not necessary to go to that extent, as there are other considerations which negative infringement.

The dominant and essential element of this claim 8 is specified as "*connections between said coil and the operating circuit comprising thin metallic strips secured to the diaphragm.*"

On the adjoining page is a reproduction of Fig. 9 of the patent. The thin metallic strips are designated by the number 27 and they have been colored green for greater clarity. They are nothing more than thin, flat, metallic ribbons provided with bifurcations at their outer ends to hook on to a binding post of the operating circuit and thus complete the connection between that circuit and the voice coil. They are described in the specification (p. 2, lines 18 and 46) as follows:

"The metallic connections between the coil 13 and the transmission line are such as to prevent interference with the free vibration of the diaphragm and coil and to obviate any danger of the connection becoming broken on account of the necessary vibrations which take place. One end of the coil is connected to one of the posts 21 and the opposite end of the coil is connected to the post 20. *Thin metallic strips 27* are glued to the diaphragm with shellac or other suitable

substance and insulating material 28 in addition to the shellac may be laid between the metallic strips and the diaphragm. The said strips 27 are secured at their inner ends to the fasteners 24 on the diaphragm and extend radially outward to the periphery of the diaphragm where they are projected downwardly and attached to binding posts 29 secured to an insulating block 30 on the sound box. The brackets or clips 19 in the form shown in Fig. 3, may serve as conductors between the metallic strips 27 and the coil, or separate wire connections 31 may be made between these parts, as shown in Fig. 4, in which case the bifurcation on the end of one of the brackets may be dispensed with and both brackets made identical and secured in place by the centrally positioned screw 20."

Also we quote from page 2, lines 75 to 84, as follows:

"By securing the *thin, metallic conducting strips* to the diaphragm, we overcome the difficulty presented in attaching a conductor to a vibratory member. The movement of the diaphragm at or near its periphery is obviously slight and therefore by fastening the conducting strips to the diaphragm at this point, there will be a minimum of bending action on the strips, with a consequent lessening of the danger of breakage."

Appellees use no such device nor any equivalent thereof. Their device consists of round telephone wire connections such as were used in the telephone art for many years previously. According to the

testimony, Pridham and Jensen first used the old round wires of the prior art in that connection, but finding them easily breakable, abandoned the same and substituted the *thin, metallic strips* 27 of their patent drawing. In this connection their contribution to the art consisted solely of such substitution. The appellees do not use any such device, but adhere to the old conventional round wires of the prior art. In fine, appellees use what Pridham and Jensen abandoned.

A patentee is bound by the language of his claims, and when the language is clear and specific, he cannot, on the theory of equivalency, include something not within that language. To do so would be to change the claim, which, of course, cannot be done.

In *White v. Dunbar*, 119 U. S. 51-52, the Court said:

“Some persons seem to suppose that a claim in a patent is like a nose of wax which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express. * * * The claim is a statutory requirement, prescribed for the very purpose of making the patentee *define precisely what his invention is*; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner *different from the plain import of its terms*. This has been so often expressed in the opinions of this court that it is unnecessary to pursue the subject further. See *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U. S. 274, 278; *James v. Campbell*, 104 U. S. 356, 370.”

In *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U. S. 274, the invention consisted of iron bars used in bridge construction and the claim called for *wide, thin, iron bars*. (p. 277.) The defendant had used *round or cylindrical bars*. It was held that there was no infringement. In fine, round, cylindrical bars were not the equivalents of wide, thin bars. The Court said at page 278:

“When the terms of a claim in a patent are clear and distinct (as they always should be), the patentee, in a suit brought upon the patent, is bound by it. * * * He can claim nothing beyond it.”

This *Keystone Bridge* case was subsequently discussed and affirmed by the Supreme Court in *McClain v. Ortmyer*, 141 U. S. 424, where, among other things, it is said:

“The object of the patent law in requiring the patentee to ‘particularly point out and distinctly claim the part, improvement or combination which he claims as his invention or discovery,’ is not only to secure to him all to which he is entitled, but to apprise the public of what is still open to them. The claim is the measure of his right to relief, and while the specification may be referred to to limit the claim, it can never be made available to expand it. Thus in *Keystone Bridge Company v. Phoenix Iron Company*, 95 U. S. 274, 278, the manufacture of round bars, flattened and drilled at the eye, for use in the lower chords of iron bridges, was held not to be an infringement of a patent for an improvement in such bridges where the claim in the specification described the patented invention as

consisting in the use of wide and thin drilled eye bars applied on edge. In delivering the opinion of the Court, Mr. Justice Bradley observed: 'It is plain, therefore, that the defendant company, which does not make said bars at all,' (that is, wide and thin bars,) 'but round or cylindrical bars, does not infringe this claim of the patent. When a claim is so explicit, the courts cannot alter or enlarge it. If the patentees have not claimed the whole of their invention, and the omission has been the result of inadvertence, they should have sought to correct the error by a surrender of their patent and an application for a reissue * * *. But the courts have no right to enlarge a patent beyond the scope of its claim as allowed by the Patent Office, or the appellate tribunal to which contested applications are referred. When the terms of a claim in a patent are clear and distinct (as they always should be), the patentee, in a suit brought upon the patent, is bound by it * * *. He can claim nothing beyond it.' "

The Supreme Court also referred to the *Keystone* case in *Coupe v. Royer*, 155 U. S. 576, and reiterated the rule of law contended for by us.

This Court has followed the rule of law laid down by the Supreme Court in the cases cited.

Thus in *Wilson & Willard v. Union Tool Co.*, 249 Fed. 729, it was said:

"* * * that the patentee is limited to his claims, and the patent is no broader than the claims, and, if the language of the claims of the patent is clear and distinct, the patentee is bound by the language he has employed."

And to the same effect is *Hardison v. Brinkman*, 156 Fed. 962, 967, where this Court said:

“It is not necessary to inquire whether Hardison by his claims unnecessarily limited his invention, or whether he might have so worded the same as to cover the combination which was adopted by the appellee. He must be held to the combination which is described and claimed so explicitly.”

Under the authorities cited, it seems clear to us that if the round, cylindrical bars of the *Keystone* case, *supra*, were not the equivalents of the wide, thin bars, then it must follow by parity of reasoning that the round, cylindrical wires of appellees are not the equivalents of the thin, metallic strips of Pridham and Jensen, and hence the charge of infringement fails.

AS TO VALIDITY OF CLAIM 8 OF PATENT NO. 1,266,988.

While the question of validity is not strictly in issue, nevertheless it may be considered as affecting the scope of the claim.

This claim slipped through the Patent Office in the form in which it was originally presented, without a single reference, yet the prior art was rich in references which might have been cited if the Patent Examiner had taken the trouble to look for them.

As early as 1877, forty-five years ago, Siemens took out British patent 4685 (Deft's Ex. E), in which he provided for *electric connections between the voice*

coil and the operating circuit, but did not describe any specific form of connections. (Siemens Specification, p. 3, lines 32-35.) This was the generic idea, and, of course, he could use any form of electric connections he saw fit. All subsequent inventors used that broad idea, some using one form and some using other forms.

British patent to *Edison, 2909 of 1877* (Deft's Ex. V) shows substantially the thin, metallic strips of Pridham and Jensen extending over a diaphragm, and calls the device "a thin strip of platina or similar material." Surely this is responsive to the term "thin metallic strips."

In his subsequent U. S. patent 203,015 of 1878 (Deft's Ex. W), Mr. Edison shows the same device in Fig. 1.

Rogers patent 297,168, of 1884 (Deft's Ex. X), shows the same device and calls it "strips of metal foil."

Richards patent 521,220, of 1894 (Deft's Ex. Y), shows the same device and calls it "any metal strip or ribbon."

Shreeve patent 602,174, of 1898 (Deft's Ex. Z), shows the same device and calls it "a ribbon or strip of metal foil or similar light conductor."

In view of the foregoing it is difficult to understand on what theory claim 8 was allowed except on that of carelessness and inadvertence. But considering those references, they certainly have the effect of narrowing the scope of the claim, if they do not actually invalidate it.

CONCLUSION.

We do not care to make any extensive comment on appellant's brief. If we are right in the application of the law to the facts of this case, as we have shown in the preceding sections of this brief, there is no need to burden the Court with a categorical reply.

The impression one gathers from reading appellant's brief is that Pridham and Jensen invented the modern loud speaker used in conjunction with present-day radio receiving sets. In places, the brief seems to argue that the two patents in suit cover generically the so-called "dynamic" or "moving coil" loud speakers used in radio reception, as distinguished from the former "magnetic" type of speaker. Pridham and Jensen made no such invention, and the impression created is entirely false.

The two patents in suit relate to *telephones* and not radios. The modern radio art developed entirely independent of any alleged contributions by Pridham and Jensen. That the Magnavox Company, in later years, was enabled to sell loud speakers was in no measure due to the Pridham and Jensen experiments with telephones nor to the patents in suit. It was the popularity of the radio itself that sold loud speakers. Pridham and Jensen were content with testing out telephone receivers in the Napa Valley and elsewhere, while others devoted their time to modernizing wireless telegraphy.

Nor were Pridham and Jensen the inventors of the so-called "dynamic" loud speaker, notwithstanding the favorable atmosphere which appellant's brief seeks

to create. The "dynamic" or "moving coil" speaker did not originate with them.

Their invention in patent No. 1,266,988, if any, is limited to "thin metallic strips" glued to the diaphragm, as set forth in said patent, so as to obviate the danger of the connection being broken on account of the vibrations which take place. This is merely a *detail of construction* which defendants do not utilize, and is a far cry from designing the up-to-date vibrating cone type radio loud speakers which we all are acquainted with in our living rooms.

The apparent new thing in the second patent No. 1,448,279 is a construction which can be easily assembled and shipped. The inner and outer poles of the magnet are a unit with the sound box, diaphragm and movable coil so that this receiver head unit can be fitted to any magnetizing structure. Suitable construction for convenient assembling seems to be the object sought to be attained, *a mere mechanical detail*.

In both patents the conception is limited to apparatus which includes a sound box enclosing a diaphragm, with provision for a horn attachment, adapted for use as a telephone receiver. Radio reception is nowhere mentioned nor remotely suggested.

We cannot fail to note the three essential requirements of a successful loud speaker, elaborated in appellant's brief at page 57. These essentials are said to be:

1. Magnetic requirements,
2. Acoustical requirements,
3. Mechanical requirements.

The inference is that these requirements were all recognized by Pridham and Jensen, and the problems involved were, indeed, solved by their invention. But we look through the two patents in vain for any mention of these requirements, much less recognition of essentials for our present-day radio receiving sets.

While Pridham and Jensen were tinkering with the old type sound box and enclosed diaphragm used by them as amplifying receivers for telephonic currents, the present almost universal cone-type loud speaker was born. Being opportunists, they now seek credit for all this recent radio development—something they neither invented nor patented.

As if to bolster up the extravagant assertions of appellant regarding the scope and value of the invention, it is said at page 70 of the brief that Magnavox Company has sold approximately one and one-half millions of the loud speakers covered by the patents in suit, these devices having a value of approximately fourteen million dollars.

This is erroneous and misleading, for it clearly appears from the record that of the total number of dynamic loud speakers sold by Magnavox, one million three hundred and seventy thousand (1,370,000) were of the vibrating free air cone construction shown in the Kellogg patent 1,707,617, which Magnavox adopted as its commercial device after abandoning its own.

We feel confident that this Court will not be misled by the elaborate and excessive statements made in appellant's brief, but will carefully scrutinize the patents themselves and especially the *two specific nar-*

row and detailed claims here in suit. These claims are scarcely mentioned in the brief. They show how limited is appellant's alleged invention.

It is respectfully submitted that the trial judge was correct in his conclusions and that the decree of dismissal herein should be affirmed with costs to appellee.

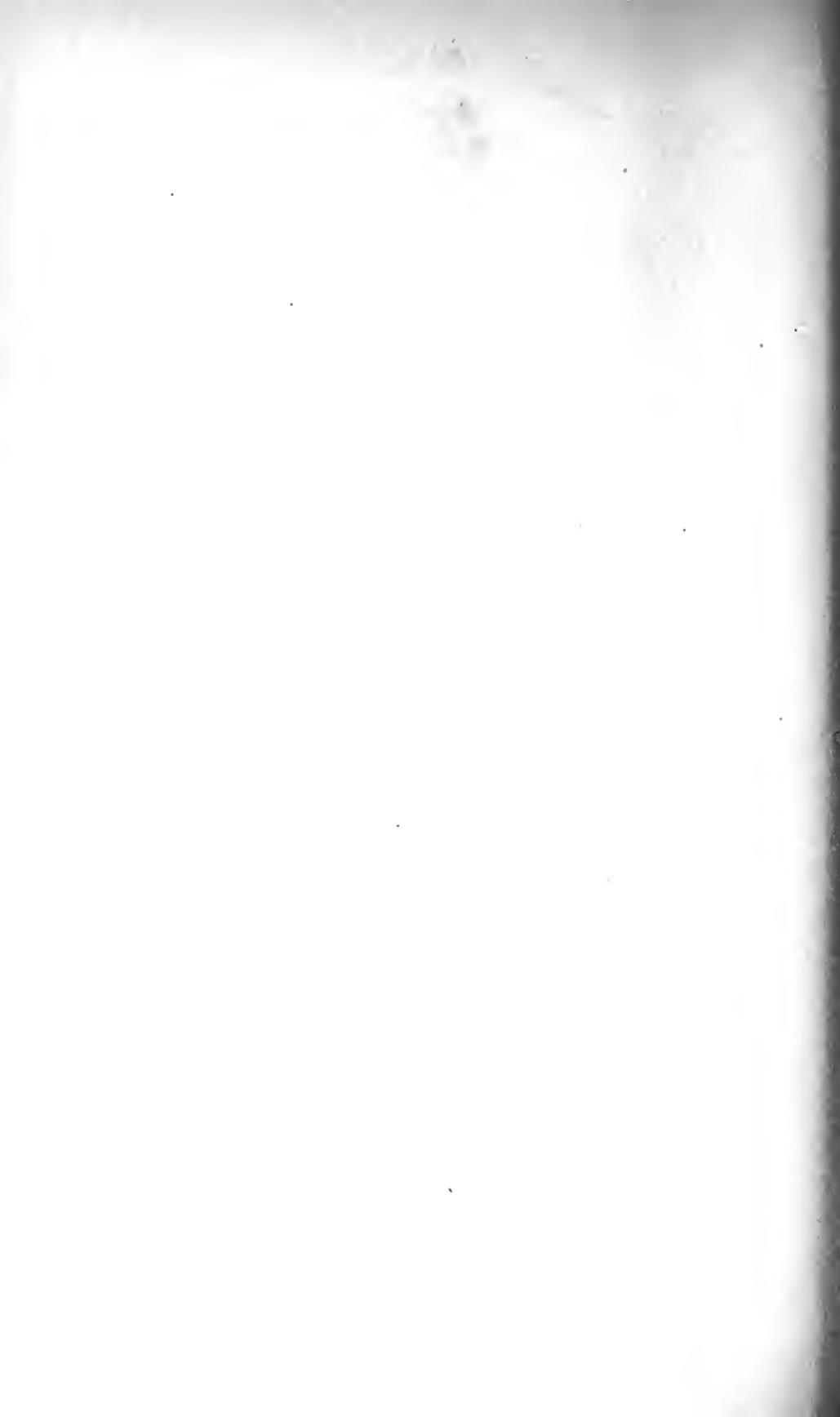
Dated, San Francisco,

March 14, 1934.

JOHN H. MILLER,

A. W. BOYKEN,

Attorneys for Appellees.



United States
Circuit Court of Appeals

For the Ninth Circuit.

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK, a corporation,

Appellant,

vs.

HERBERT E. FREY,

Appellee.

Transcript of Record

Upon Appeal from the District Court of the United
States for the Northern District of California,
Southern Division.

Filed

JAN 18 1934

PAUL P. OBRIEN,
CLERK



United States
Circuit Court of Appeals

For the Ninth Circuit.

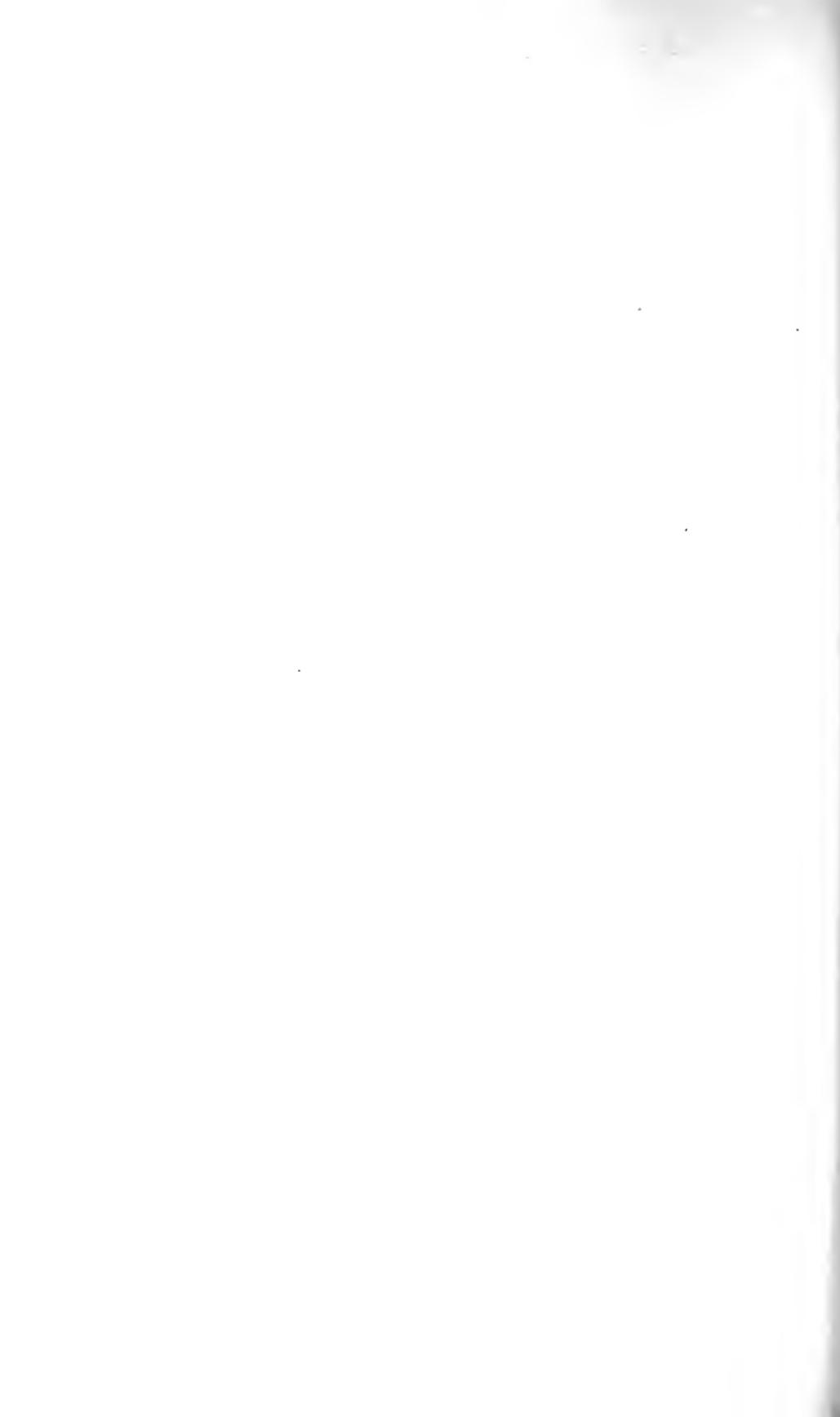
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[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in *italic*; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in *italic* the two words between which the omission seems to occur.]

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San Francisco, Calif.,
Attorneys for Appellee & Plaintiff.

In the Superior Court of the State of California, in
and for the City and County of San Francisco.

No. 19303-L.

HERBERT E. FREY,

Plaintiff,

vs.

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK, a corporation,
Defendant.

COMPLAINT.

Plaintiff complains and alleges as follows:

I.

That defendant is, and at all times herein mentioned was, a corporation organized, existing and doing business under and by virtue of the laws of the State of New York, with its principal place of business in the State of New York, and with an office in San Francisco, California.

II.

That heretofore and on or about the 15th day of April, 1932, defendant, in consideration of \$152.20 to it paid, made, executed and delivered to plaintiff its certain policy of insurance upon the life of one Walter E. Frey, under and by virtue of which defendant promised to pay to plaintiff, the beneficiary named therein, the sum of Ten Thousand Dollars (\$10,000.) upon receipt of due proof of the death of the said Walter E. Frey prior to the 9th day of March, 1947.

III.

That thereafter and on or about the 20th day of May, 1932, defendant requested the return of said policy upon the representation that it was desired by it for auditing purposes; [1*] that upon such representation plaintiff did return said policy to defendant; that said policy has never been returned by defendant to plaintiff, although demand has been made therefor upon defendant by plaintiff; that plaintiff is informed and believes and upon such information and belief alleges that said policy has been, at all times since it was given to defendant as alleged, and now is, in the possession of defendant; that plaintiff is, therefore, unable to set out in full the terms and conditions of said policy.

IV.

That plaintiff and said Walter E. Frey has each duly performed all things on his part to be performed under said policy.

*Page numbering appearing at the foot of page of original certified Transcript of Record.

V.

That said Walter E. Frey died at San Francisco, California, on June 4, 1932.

VI.

That on or about the 13th day of June, 1932, plaintiff gave to defendant written notice of the death of said Walter E. Frey and notified defendant that he desired to present proof of death under said policy and plaintiff thereupon requested that defendant furnish to him its customary forms of proof of death for said purpose; that defendant nevertheless failed and refused to furnish plaintiff with such forms of proof and denied all liability upon said policy, and denied that said policy was in force or effect.

VII.

That plaintiff has demanded from defendant payment of the sum of \$10,000 under said policy but defendant has failed and refused to pay to plaintiff the said sum of \$10,000, or any part thereof, and said sum of \$10,000 is now due, owing and [2] unpaid by defendant to plaintiff.

WHEREFORE, plaintiff prays judgment against defendant on this first cause of action in the sum of \$10,000, together with interest thereon at the rate of seven percent per annum, together with his costs incurred herein, and for general relief.

And as a second and separate cause of action against defendant herein, plaintiff alleges:

VIII.

Plaintiff incorporates herein by reference each

and every allegation contained in Paragraph I. of the first cause of action herein.

IX

That on or about the 1st day of June, 1932, defendant made, executed and delivered to plaintiff its certain policy of insurance upon the life of the aforesaid Walter E. Frey under and by virtue of which defendant promised to pay to plaintiff, the beneficiary named therein, the sum of Five Thousand Dollars (\$5,000) upon receipt of due proof of the death of said Walter E. Frey prior to the 1st day of June, 1947; that a copy of said policy of insurance is annexed hereto, marked Exhibit "A", and made a part of this complaint; that attached to said policy of insurance is an application of said Walter E. Frey for said insurance, copy of which is annexed hereto and marked Exhibit "B" and made a part of this complaint.

X.

Plaintiff and said Walter E. Frey has each duly performed all things on his part to be performed under said policy.

XI.

The said Walter E. Frey died at San Francisco, [3] California, on June 4, 1932.

XII.

That on or about the 13th day of June, 1932, plaintiff gave to defendant written notice of the death of said Walter E. Frey and notified defendant that he desired to present proof of death under said policy and plaintiff thereupon requested that defendant furnish to him its customary forms of

proof of death for said purpose; that defendant nevertheless failed and refused to furnish plaintiff with such forms of proof and denied all liability upon said policy, and denied that said policy was in force or effect, and demanded that plaintiff surrender said policy to defendant without payment thereof by defendant.

XIII.

That plaintiff has demanded from defendant payment of the sum of \$5,000 under said policy but defendant has failed and refused to pay to plaintiff the said sum of \$5,000, or any part thereof, and that no part of said sum of \$5,000 has ever been paid, and that said sum of \$5,000 is now due, owing and unpaid by defendant to plaintiff.

WHEREFORE, plaintiff prays judgment against defendant on this second cause of action in the sum of \$5,000, together with interest thereon at the rate of seven percent per annum, together with his costs incurred herein, and for general relief.

And as a third and separate cause of action against defendant herein, plaintiff alleges:

XIV.

Plaintiff incorporates herein by reference each and every allegation contained in Paragraph I. of the first cause of action herein. [4]

XV.

That on or about the 1st day of June, 1932, defendant made, executed and delivered to plaintiff its certain policy of insurance upon the life of the

aforesaid Walter E. Frey under and by virtue of which defendant promised to pay to plaintiff, the beneficiary named therein, the sum of Ten Thousand Dollars (\$10,000) upon receipt of due proof of the death of said Walter E. Frey prior to the 1st day of June, 1947; that a copy of said policy of insurance is annexed hereto, marked Exhibit "C", and made a part of this complaint; that attached to said policy of insurance is an application of said Walter E. Frey for said insurance, copy of which is annexed hereto and marked Exhibit "D" and made a part of this complaint.

XVI.

Plaintiff and said Walter E. Frey has each duly performed all things on his part to be performed under said policy.

XVII.

That said Walter E. Frey died at San Francisco, California, on June 4, 1932.

XVIII.

That on or about the 13th day of June, 1932, plaintiff gave to defendant written notice of the death of said Walter E. Frey and notified defendant that he desired to present proof of death under said policy and plaintiff thereupon requested that defendant furnish to him its customary forms of proof of death for said purpose; that defendant nevertheless failed and refused to furnish plaintiff with such forms of proof and denied all liability upon said policy, and denied that said policy was in force or effect, and demanded that plaintiff surrender said policy to defendant without payment thereof by defendant. [5]

XIX.

That plaintiff has demanded from defendant payment of the sum of \$10,000 under said policy but defendant has failed and refused to pay to plaintiff the said sum of \$10,000 or any part thereof, and that no part of said sum of \$10,000 has ever been paid, and that said sum of \$10,000 is now due, owing and unpaid by defendant to plaintiff.

WHEREFORE, plaintiff prays judgment against defendant on this third cause of action in the sum of \$10,000, together with interest thereon at the rate of seven percent per annum, together with his costs incurred herein, and for general relief.

And as a fourth and separate cause of action against defendant herein, plaintiff alleges:

XX.

Plaintiff incorporates herein by reference each and every allegation contained in Paragraph I. of the first cause of action herein.

XXI.

That heretofore and on or about the 15th day of April, 1932, defendant in consideration of \$152.20 to it paid, made, executed and delivered to one Selma Frey Steventon its certain policy of insurance upon the life of the aforesaid Walter E. Frey under and by virtue of which defendant promised to pay to said Selma Frey Steventon the sum of Ten Thousand Dollars (\$10,000) upon receipt of due proof of the death of said Walter E. Frey prior to the 9th day of March, 1947.

XXII.

That thereafter and on or about the 20th day of May, 1932, defendant requested the return of said policy upon the representation that it was desired by it for auditing purposes; [6] that upon such representation said Selma Frey Steventon did return said policy to defendant; that said policy has never been returned by defendant to said Selma Frey Steventon, although demand has been made therefor upon defendant by said Selma Frey Steventon; that plaintiff is informed and believes and upon such information and belief alleges that said policy has been, at all times since it was given to defendant as alleged, and now is, in the possession of defendant; that plaintiff is, therefore, unable to set out in full the terms and conditions of said policy; that plaintiff is informed and believes and upon such information and belief alleges that by the terms of said policy of insurance the beneficiary is described as "Thelma Frey, the sister of the insured"; and plaintiff alleges that said Selma Frey Steventon is the person named in said policy as the beneficiary.

XXIII.

That plaintiff and Selma Frey Steventon and said Walter E. Frey has each duly performed all things on his part to be performed under said policy.

XXIV.

That said Walter E. Frey died at San Francisco, California, on June 4, 1932.

XXV.

That on or about the 13th day of June, 1932, said Selma Frey Steventon gave to defendant written notice of the death of said Walter E. Frey and notified defendant that she desired to present proof of death under said policy and Selma Frey Steventon thereupon requested that defendant furnish to her its customary forms of proof of death for said purpose; that defendant nevertheless failed and refused to furnish said Selma Frey Steventon with such forms of proof and denied all [7] liability upon said policy, and denied that said policy was in force or effect.

XXVI.

That said Selma Frey Steventon has demanded from defendant payment of the sum of \$10,000 under said policy but defendant has failed and refused to pay to said Selma Frey Steventon the said sum of \$10,000, or any part thereof, and that said sum of \$10,000 is now due, owing and unpaid.

XXVII.

That heretofore and prior to the commencement of this action said Selma Frey Steventon assigned and transferred to plaintiff her said claim and demand against said defendant, arising out of and/or under said policy of insurance, and plaintiff has ever since been, and now is, the owner thereof.

WHEREFORE, plaintiff prays judgment against defendant on this fourth cause of action in the sum of \$10,000, together with interest thereon at the rate of seven percent per annum, together with his costs incurred herein, and for general relief.

And as a fifth and separate cause of action against defendant herein, plaintiff alleges:

XXVIII.

Plaintiff incorporates herein by reference each and every allegation contained in Paragraph I. of the first cause of action herein.

XXIX.

That on or about the 1st day of June, 1932, defendant made, executed and delivered to one John I. Steventon its certain policy of insurance upon the life of the aforesaid Walter E. Frey under and by virtue of which defendant promised to pay to said John I. Steventon, the beneficiary named therein, the sum of [8] Five Thousand Dollars (\$5,000) upon receipt of due proof of the death of said Walter E. Frey prior to the 1st day of June, 1947; that a copy of said policy of insurance is annexed hereto, marked Exhibit "E", and made a part of this complaint; that attached to said policy of insurance is an application of said Walter E. Frey for said insurance, copy of which is annexed hereto and marked Exhibit "F", and made a part of this complaint.

XXX.

That plaintiff and said John I. Steventon and said Walter E. Frey has each duly performed all things on his part to be performed under said policy.

XXXI.

That said Walter E. Frey died at San Francisco, California, on June 4, 1932.

XXXII.

That on or about the 13th day of June, 1932, said John I. Steventon gave to defendant written notice of the death of said Walter E. Frey and notified defendant that he desired to present proof of death under said policy and said John I. Steventon thereupon requested that defendant furnish to him its customary forms of proof of death for said purpose; that defendant nevertheless failed and refused to furnish said John I. Steventon with such forms of proof and denied all liability upon said policy, and denied that said policy was in force or effect, and demanded that said John I. Steventon surrender said policy to defendant without payment thereof by defendant.

XXXIII.

That said John I. Steventon has demanded from defendant payment of the sum of \$5,000 under said policy but defendant has failed and refused to pay to said John I. Steventon the said sum of \$5,000, or any part thereof, and that no part of said sum of [9] \$5,000 has ever been paid and that said sum of \$5,000 is now due, owing and unpaid.

XXXIV.

That heretofore and prior to the commencement of this action said John I. Steventon assigned and transferred to plaintiff his said claim and demand against said defendant, arising out of and/or under said policy of insurance and plaintiff has ever since been, and now is, the owner thereof.

WHEREFORE, plaintiff prays judgment against

defendant on this fifth cause of action in the sum of \$5,000, together with interest thereon at the rate of seven percent per annum, together with his costs incurred herein, and for general relief.

Dated: June 28, 1932.

CARL R. SCHULZ,
NORMAN A. EISNER,
Attorneys for Plaintiff. [10]

State of California,
City and County of San Francisco.—ss.

HERBERT E. FREY, being duly sworn; deposes and says: that he is the plaintiff in the above-entitled action; that he has read the foregoing complaint and knows the contents thereof; that the same is true of his own knowledge, except as to those matters which are therein stated on his information or belief, and as to those matters that he believes it to be true.

HERBERT E. FREY.

Subscribed and sworn to before me this 16th day of July, 1932.

[Seal]

KATHRYN E. STONE,
Notary Public in and for the City and County
of San Francisco, State of California.

[Endorsed]: Filed in Superior Court Jul. 18, 1932. [11]

[Title of Court and Cause.]

ORDER FOR REMOVAL

Defendant above-named, The Mutual Life Insurance Company of New York, a corporation, having filed herein its petition for removal in the above-entitled cause to the Southern Division of the United States District Court, for the Northern District of California, and having filed therewith a good and sufficient bond, conditioned as required by law, and having given due notice of the time and place for the presentation of said petition and bond; now, therefore, it is

ORDERED That the above-entitled cause be transferred to the Southern Division of the United States District Court, for the Northern District of California, for further proceedings; and it is further

ORDERED That the bond and undertaking on removal tendered herewith be and the same is hereby approved.

Dated July 3rd, 1932.

C. J. GOODELL,

Judge of the Superior Court of the State of California, in and for the City and County of San Francisco.

[Endorsed]: Filed Superior Court August 3, 1932.

[Endorsed]: Filed United States District Court August 15, 1932. [27]

In the Southern Division of the United States District Court, in and for the Northern District of California.

No. 19303-L

HERBERT E. FREY,

Plaintiff,

vs.

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK, a corporation,
Defendant.

ANSWER

Comes now defendant and answers the first count in the complaint herein as follows:

I.

Admits the allegations of section "I".

II.

Denies that defendant ever executed or delivered to plaintiff or to Walter E. Frey any policy of insurance upon the life of Walter E. Frey for or upon any consideration paid or to be paid; and denies that defendant ever promised to pay to plaintiff any sum upon receipt of proof of death of Walter E. Frey, or otherwise, at any time.

III.

Denies that defendant ever requested the return of any policy upon the representation that it was desired for auditing purposes. Denies that upon such representation plaintiff did return any policy to defendant, or any one.

IV.

Denies that plaintiff and Walter E. Frey, or either of them, ever duly or otherwise performed any of the things on their or his part to be performed under said policy or otherwise. [28]

V.

Admits the allegations of section "V."

VI.

Admits the allegations of section "VI".

VII.

Denies that any sum is or ever was due or owing or unpaid by defendant to plaintiff.

BY WAY OF SPECIAL SEPARATE DEFENSE, defendant alleges that on or about the 5th day of March, 1932, said Walter E. Frey made written application to plaintiff for certain insurance upon his life; that a copy of said application is annexed to and made a part of the complaint herein, and marked "Exhibit B"; that in and by said application said Walter E. Frey understood and agreed among other things as follows:

"This application is made to The Mutual Life Insurance Company of New York, herein called the Company. All the following statements and answers, and all those that the insured makes to the Company's medical examiner, in continuation of this application, are

true and are offered to the Company as an inducement to issue the proposed policy. The insured expressly waives on behalf of himself or herself and of any person who shall have or claim any interest in any policy issued hereunder, all provisions of law forbidding any physician or other person who has attended or examined, or who may hereafter attend or examine the insured, from disclosing any knowledge or information which he thereby acquired. The proposed policy shall not take effect unless and until delivered to and received by the insured, the beneficiary or by the person who herein agrees to pay the premiums, during the insured's continuance in good health and unless and until the first premium shall have been paid during the insured's continuance in good health."

"It is agreed that in the event of the self-destruction of the insured during the first year following the date of issue of the policy hereby applied for whether sane or insane the Company's liability shall be limited to the amount of the premiums paid. It is [29] agreed that no agent or other person except the President, Vice-President, a Second Vice-President or a Secretary of the Company has power on behalf of the Company to bind the Company by making any promise respecting benefits under any policy issued hereunder or accepting any representations or information not contained in this application, or to make, modify or dis-

charge any contract of insurance, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the Company's rights or requirements."

That no premium or money was ever paid to defendant by plaintiff nor by Walter E. Frey, in connection with any insurance so applied for by him, or otherwise; that neither plaintiff nor Walter E. Frey ever made any other application for insurance upon the life of Walter E. Frey; that prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, said Walter E. Frey was not in good health, but, on the contrary, said Walter E. Frey was, prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, afflicted with coronary sclerosis and chronic myocarditis, and died from acute dilation of the heart, coronary sclerosis with occlusion, and chronic myocarditis; that such fact was not known to defendant until after the death of Walter E. Frey.

Comes now the defendant and answers the second count in said complaint as follows:

VIII.

Admits the allegations of section "VIII".

IX.

Denies that on or about the 1st day of June, 1932,

defendant made or executed or delivered to plaintiff any policy of insurance on the life of Walter E. Frey. Denies that by virtue of said policy, or otherwise, defendant promised to pay to [30] plaintiff any sum under any circumstances. In this connection defendant alleges that on the 4th day of June, 1932, and after the death of Walter E. Frey, one Steinfeld, without authority, and contrary to the terms of the written application hereinafter referred to, transmitted physical possession of the policy annexed to the complaint, and marked "Exhibit A", to plaintiff, and in this same connection defendant further alleges that on or about the 5th day of March, 1932, said Walter E. Frey made written application to plaintiff for certain insurance upon his life; that a copy of said application is annexed to and made a part of the complaint herein, and marked "Exhibit B"; that in and by said application said Walter E. Frey understood and agreed among other things as follows:

"This application is made to The Mutual Life Insurance Company of New York, herein called the Company. All the following statements and answers, and all those that the insured makes to the Company's medical examiner, in continuation of this application, are true and are offered to the Company as an inducement to issue the proposed policy. The insured expressly waives on behalf of himself or herself and of any person who shall have or claim any interest in any policy issued hereunder, all provisions of law forbidding any

physician or other person who has attended or examined, or who may hereafter attend or examine the insured, from disclosing any knowledge or information which he thereby acquired. The proposed policy shall not take effect unless and until delivered to and received by the insured, the beneficiary or by the person who herein agrees to pay the premiums, during the insured's continuance in good health and unless and until the first premiums shall have been paid during the insured's continuance in good health."

"It is agreed that in the event of the self-destruction of the insured during the first year following the date of issue of the policy hereby applied for whether sane or insane the Company's liability shall be limited to the amount of the premiums paid. It is agreed that no agent or other person except the President, Vice-President, a Second Vice-President, or a Secretary of the Company has power on behalf of the Company to bind the Company by making any promise respecting benefits under any policy issued hereunder or accepting any representations or information not contained [31] in this application, or to make, modify or discharge any contract of insurance, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the Company's rights or requirements."

That no premium or money was ever paid to defendant by plaintiff nor by Walter E. Frey, in con-

nection with any insurance so applied for by him, or otherwise; that neither plaintiff nor Walter E. Frey ever made any other application for insurance upon the life of Walter E. Frey; that prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, said Walter E. Frey was not in good health, but, on the contrary, said Walter E. Frey was, prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, afflicted with coronary sclerosis and chronic myocarditis, and died from acute dilation of the heart, coronary sclerosis with occlusion, and chronic myocarditis; that such fact was not known to defendant until after the death of Walter E. Frey.

X.

Denies that plaintiff and Walter E. Frey, or either of them, ever duly or otherwise performed any of the things on their or his part to be performed under said policy or otherwise.

XI.

Admits the allegations of section "XI".

XII.

Admits the allegations of section "XII".

XIII.

Denies that any sum is or ever was due or owing or unpaid by defendant to plaintiff. [32]

Comes now the defendant and answers the third count in said complaint as follows:

XIV.

Admits the allegations of section "XIV".

XV.

Denies that on or about the 1st day of June, 1932, defendant made or executed or delivered to plaintiff any policy of insurance on the life of Walter E. Frey. Denies that by virtue of said policy, or otherwise, defendant promised to pay to plaintiff any sum under any circumstances. In this connection defendant alleges that on the 4th day of June, 1932, and after the death of Walter E. Frey, one Steinfeld, without authority, and contrary to the terms of the written application hereinafter referred to, transmitted physical possession of the policy annexed to the complaint, and marked "Exhibit C", to plaintiff, and in this same connection defendant further alleges that on or about the 5th day of March, 1932, said Walter E. Frey made written application to plaintiff for certain insurance upon his life; that a copy of said application is annexed to and made a part of the complaint herein, and marked "Exhibit D"; that in and by said application said Walter E. Frey understood and agreed among other things as follows:

"This application is made to The Mutual Life Insurance Company of New York, herein called the Company. All the following statements and answers, and all those that the in-

sured makes to the Company's medical examiner, in continuation of this application, are true and are offered to the Company as an inducement to issue the proposed policy. The insured expressly waives on behalf of himself or herself and of any person who shall have or claim any interest in any policy issued hereunder, all provisions of law forbidding any physician or other person who has attended or examined, or who may hereafter attend or examine the insured, from disclosing any knowledge or information which he thereby acquired. The proposed policy shall [33] not take effect unless and until delivered to and received by the insured, the beneficiary or by the person who herein agrees to pay the premiums, during the insured's continuance in good health and unless and until the first premium shall have been paid during the insured's continuance in good health."

"It is agreed that in the event of the self-destruction of the insured during the first year following the date of issue of the policy hereby applied for whether sane or insane the Company's liability shall be limited to the amount of the premiums paid. It is agreed that no agent or other person except the President, Vice-President, a Second Vice-President, or a Secretary of the Company has power on behalf of the Company to bind the Company by making any promise respecting benefits under any policy issued hereunder or accepting any rep-

resentations or information not contained in this application, or to make, modify or discharge any contract of insurance, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the Company's rights or requirements."

That no premium or money was ever paid to defendant by plaintiff nor by Walter E. Frey, in connection with any insurance so applied for by him, or otherwise; that neither plaintiff nor Walter E. Frey ever made any other application for insurance upon the life of Walter E. Frey; that prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, said Walter E. Frey was not in good health, but, on the contrary, said Walter E. Frey was, prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, afflicted with coronary sclerosis and chronic myocarditis, and died from acute dilation of the heart, coronary sclerosis with occlusion, and chronic myocarditis; that such fact was not known to defendant until after the death of Walter E. Frey.

XVI.

Denies that plaintiff and Walter E. Frey, or either of them, ever duly or otherwise performed any of the things on their or his part to be performed under said policy or otherwise. [34]

XVII.

Admits the allegations of section "XVII".

XVIII.

Admits the allegations of section "XVIII".

XIX.

Denies that any sum is or ever was due or owing or unpaid by defendant to plaintiff.

Comes now the defendant and answers the fourth count in the complaint herein as follows:

XX.

Admits the allegations of section "XX".

XXI.

Denies that defendant ever executed or delivered to Selma Frey Steventon or to Walter E. Frey any policy of insurance upon the life of Walter E. Frey for or upon any consideration paid or to be paid; and denies that defendant ever promised to pay to Selma Frey Steventon any sum upon receipt of proof of death of Walter E. Frey, or otherwise, at any time.

XXII.

Denies that defendant ever requested the return of any policy upon the representation that it was desired for auditing purposes. Denies that upon such representation Selma Frey Steventon did return any policy to defendant, or any one.

XXIII.

Denies that plaintiff and Walter E. Frey and Selma Frey Steventon, or either or any of them,

ever duly or otherwise performed any of the things on their or his part to be [35] performed under said policy or otherwise.

XXIV.

Admits the allegations of section "XXIV".

XXV.

Admits the allegations of section "XXV."

XXVI.

Denies that any sum is or ever was due or owing or unpaid by defendant to plaintiff.

XXVII.

Denies, for lack of information or belief, the allegations of section "XXVII".

BY WAY OF SPECIAL SEPARATE DEFENSE, defendant alleges that on or about the 5th day of March, 1932, said Walter E. Frey made written application to plaintiff for certain insurance upon his life; that a copy of said application is annexed to and made a part of the complaint herein, and marked "Exhibit B"; that in and by said application said Walter E. Frey understood and agreed among other things as follows:

"This application is made to The Mutual Life Insurance Company of New York, herein called the Company. All the following statements and answers, and all those that the in-

sured makes to the Company's medical examiner, in continuation of this application, are true and are offered to the Company as an inducement to issue the proposed policy. The insured expressly waives on behalf of himself or herself and of any person who shall have or claim any interest in any policy issued hereunder, all provisions of law forbidding any physician or other person who has attended or examined, or who may hereafter attend or examine the insured, from disclosing any knowledge or information which he thereby acquired. The proposed policy shall not take effect unless and until delivered to and received by the insured, the beneficiary or by the person who herein agrees to pay the premiums, during the insured's continuance in good health and unless and [36] until the first premium shall have been paid during the insured's continuance in good health."

"It is agreed that in the event of the self-destruction of the insured during the first year following the date of issue of the policy hereby applied for whether sane or insane the Company's liability shall be limited to the amount of the premiums paid. It is agreed that no agent or other person except the President, Vice-President, a Second Vice-President, or a Secretary of the Company has power on behalf of the Company to bind the Company by making

any promise respecting benefits under any policy issued hereunder or accepting any representations or information not contained in this application, or to make, modify or discharge any contract of insurance, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the Company's rights or requirements."

That no premium or money was ever paid to defendant by plaintiff nor by Walter E. Frey, nor by Selma Frey Steventon, in connection with any insurance so applied for by him, or otherwise; that neither plaintiff nor Walter E. Frey, nor Selma Frey Steventon, ever made any other application for insurance upon the life of Walter E. Frey; that prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, said Walter E. Frey was not in good health, but, on the contrary, said Walter E. Frey was, prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, afflicted with coronary sclerosis and chronic myocarditis, and died from acute dilation of the heart, coronary sclerosis with occlusion, and chronic myocarditis; that such fact was not known to defendant until after the death of Walter E. Frey.

Comes now the defendant and answers the fifth count in said complaint as follows:

XXVIII.

Admits the allegations of section "XXVIII".
[37]

XXIX.

Denies that on or about the 1st day of June, 1932, defendant made or executed or delivered to John I. Steventon any policy of insurance on the life of Walter E. Frey. Denies that by virtue of said policy, or otherwise, defendant promised to pay to John I. Steventon any sum under any circumstances. In this connection defendant alleges that on the 4th day of June, 1932, and after the death of Walter E. Frey, one Steinfeld, without authority, and contrary to the terms of the written application hereinafter referred to, transmitted physical possession of the policy annexed to the complaint, and marked "Exhibit E", to John I. Steventon, and in this same connection defendant further alleges that on or about the 5th day of March, 1932, said Walter E. Frey made written application to plaintiff for certain insurance upon his life; that a copy of said application is annexed to and made a part of the complaint herein, and marked "Exhibit E"; that in and by said application said Walter E. Frey understood and agreed among other things as follows:

"This application is made to The Mutual Life Insurance Company of New York, herein called the Company. All the following statements and answers, and all those that the insured makes to the Company's medical examiner, in continuation of this application, are

true and are offered to the Company as an inducement to issue the proposed policy. The insured expressly waives on behalf of himself or herself and of any person who shall have or claim any interest in any policy issued hereunder, all provisions of law forbidding any physician or other person who has attended or examined, or who may hereafter attend or examine the insured, from disclosing any knowledge or information which he thereby acquired. The proposed policy shall not take effect unless and until delivered to and received by the insured, the beneficiary or by the person who herein agrees to pay the premiums, during the insured's continuance in good health and unless and until the first premium shall have been paid during the insured's continuance in good health."

"It is agreed that in the event of the self-[38] destruction of the insured during the first year following the date of issue of the policy hereby applied for whether sane or insane the Company's liability shall be limited to the amount of the premiums paid. It is agreed that no agent or other person except the President, Vice-President, a Second Vice-President, or a Secretary of the Company has power on behalf of the Company to bind the Company by making any promise respecting benefits under any policy issued hereunder or accepting any representations or information not contained in this application, or to make, modify or discharge any

contract of insurance, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the Company's rights or requirements."

That no premium or money was ever paid to defendant by John I. Steventon, nor by Walter E. Frey, in connection with any insurance so applied for by him, or otherwise; that neither John I. Steventon, nor Walter E. Frey, ever made any other application for insurance upon the life of Walter E. Frey; that prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, said Walter E. Frey was not in good health, but, on the contrary, said Walter E. Frey was, prior to and on said 5th day of March, 1932, and continuously thereafter up to the time of his death, afflicted with coronary sclerosis and chronic myocarditis, and died from acute dilation of the heart, coronary sclerosis with occlusion, and chronic myocarditis; that such fact was not known to defendant until after the death of Walter E. Frey.

XXX.

Denies that plaintiff and Walter E. Frey and John I. Steventon, or either or any of them, ever duly or otherwise performed any of the things on their part or his part to be performed under said policy or otherwise.

XXXI.

Admits the allegations of section "XXXI". [39]

XXXII.

Admits the allegations of section "XXXII".

XXXIII.

Denies that any sum is or ever was due or owing or unpaid by defendant to plaintiff.

XXXIV.

Denies, for lack of information or belief, the allegations of section "XXXIV".

WHEREFORE, defendant prays that it be hence dismissed with its costs.

F. ELDRED BOLAND,
KNIGHT, BOLAND & RIORDAN,
Attorneys for Defendant. [40]

State of California,
City and County of San Francisco.—ss.

F. ELDRED BOLAND, being first duly sworn, deposes and says:

That he is one of the attorneys for The Mutual Life Insurance Company of New York, a corporation, defendant in the within action; that there is no officer of said defendant corporation within the City and County of San Francisco, State of California, where affiant has his office, and that for that reason affiant makes this affidavit in its behalf.

That he has read the foregoing answer and knows the contents thereof; that the same is true of his own knowledge except as to those matters stated

therein on information or belief, and as to such matters, that he believes it to be true.

F. ELDRED BOLAND.

Subscribed and sworn to before me this 12th day of September, 1932.

[Seal]

MARION CURTIS,

Notary Public

In and for the City and County of
San Francisco, State of California.

Due service and receipt of a copy of the within Answer is hereby admitted this 14th day of September, 1932.

NORMAN A. EISNER,

CARL R. SCHULZ,

Attorneys for Plaintiff.

[Endorsed]: Filed Sept. 14, 1932. [41]

[Title of Court and Cause.]

VERDICT

We, the Jury, find in favor of the plaintiff..... and assess the damages against the Defendant in the sum of (\$20,000.00) Twenty Thousand Dollars on account of Policies Numbered 4,591472 and 4,591473. (\$20,000.00) Dollars.

H. R. BROWNE,

Foreman.

[Endorsed]: Filed May 22, 1933, at 3 o'clock and 30 minutes P. M. [42]

[Title of Court and Cause.]

VERDICT

We, the Jury, find in favor of the Defendant.....
as to policies numbered 4,615420, 4,615421, and
4600870.

H. R. BROWNE,
Foreman.

[Endorsed]: Filed May 22, 1933, at 3 o'clock and
30 minutes P. M. [43]

In the Southern Division of the United States Dis-
trict Court for the Northern District of Cali-
fornia.

No. 19303-L

HERBERT E. FREY,
Plaintiff,

vs.

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK, a corporation,
Defendant.

AMENDED JUDGMENT ON VERDICT

This cause having come on regularly for trial on
the 16th day of May, 1933, being a day in the March,
1933, Term of said Court, before the Court and a
Jury of twelve men duly impaneled and sworn to
try the issues joined herein; Norman A. Eisner and
Carl R. Schulz, Esquires, appearing as attorneys

for plaintiff, and F. E. Boland, Esq., appearing as attorney for defendant, and the trial having been proceeded with on the 18th, 19th and 22nd days of May, in said year and term, and oral and documentary evidence on behalf of the respective parties having been introduced and closed, and the cause, after arguments by the attorneys and the instructions of the Court, having been submitted to the Jury and the Jury having subsequently rendered the following verdicts, which were ordered recorded, namely: "We, the Jury, find in favor of the Plaintiff and assess the damages against the Defendant in the sum of (\$20,000.00) Twenty Thousand Dollars on account of Policies Numbered 4,591472 and 4,591473 (\$20,000.00) Dollars. H. R. Browne, Foreman.", and "We, the Jury, find in favor of the Defendant as to policies numbered 4,615420, 4,615421, and 4600870. H. R. Browne, Foreman.", and the Court having ordered that judgment be entered herein in accordance with said verdicts in favor of plaintiff in the sum of \$20,000.00, together with interest at the rate of 7% per annum from June 13, 1932, to May 22, 1933, and for costs:

Now, therefore, by virtue of the law and by reason of the premises aforesaid, it is considered by the Court that Herbert E. Frey, Plaintiff, do have and recover of and from The Mutual Life Insurance Company of New York, a corporation, Defendant, the sum of Twenty-One Thousand Three Hundred Eighteen and $\frac{33}{100}$ (\$21,318.33) Dollars, together with his costs herein expended taxed at \$87.40.

Judgment entered this 6th day of June, 1933,
nunc pro tunc May 22, 1933.

WALTER B. MALING,
Clerk.

Pursuant to an order signed and filed on June 28th, 1933, the within judgment is amended, modified and reduced to the sum of \$20,993.87 instead of \$21,318.33.

WALTER B. MALING,
Clerk.

[Endorsed]: Filed June 6, 1933, nunc pro tunc
May 22, 1933. [44]

[Title of Court and Cause.]

ENGROSSED BILL OF EXCEPTIONS

BE IT REMEMBERED, That the above-entitled cause came on regularly for trial before the above-entitled court, on the 16th day of May, 1933, and after a jury was duly and regularly impaneled and sworn, the following proceedings were had:

Plaintiff offered in evidence policy No. 4,615,421, policy No. 4,600,870 and policy No. 4,615,420.

MR. BOLAND: I object to the offer and introduction in evidence upon the grounds, first, that it does not appear that the policies are in conformity with the application which is printed therein. Second: there is no showing that the premium thereon was paid. Third: It does not appear that any of the policies were delivered. Fourth: Upon the ground that the premium thereon was not paid while the insured was in good health, and that

the burden of proof is upon the plaintiff to establish that delivery occurred while the applicant was in good health. Fifth: That the premium was not paid while the applicant was in good health. [46]

The objection was overruled and exception allowed, and the policies introduced in evidence, and copies of each are annexed to and are a part of the complaint herein.

Plaintiff thereupon offered in evidence copies of policies numbers 4,591,472 and 4,591,473, following stipulation of counsel that they were copies of policies dated March 8, 1932, and were furnished by defendant to plaintiff pursuant to an order of this court, that the originals had been destroyed, that the copies of the applications annexed thereto were annexed in error and that the true applications were the same as annexed to the other policies exhibits 1 and 2; that the marks "cancelled" appearing upon the signatures were not upon the originals at the time the policies were in the hands of plaintiff, and that the beneficiary as shown on the original of exhibit 3 was Thelma Frey.

THE COURT: (referring to exhibits 3 and 4) We will consider them as copies of the originals.

MR. BOLAND: As to these, I will make the same objection, if I may do it in that manner, without repeating the grounds of objection.

THE COURT: Yes, you may, of course.

MR. BOLAND: And I add to the objection that these are copies and the original is not accounted for, and there can be no assumption of delivery by the mere fact of possession, and therefore there is

no foundation laid for their introduction; also, upon the further ground, as it appears in the policies themselves, the application was for \$35,000, payable to the San Francisco Milling Company, which is not involved here, and the two \$10,000 policies, and not for five policies, and that, therefore, either these policies are not admissible or the plaintiff must be put to his election as to which \$20,000 he will rely upon.

The objection was overruled; exception allowed; policies introduced in evidence and marked "Plaintiff's Exhibit 3" and "Plaintiff's Exhibit 4." (Here insert.) [47]

Thereupon plaintiff offered in evidence the assignment of John I. Steventon of the policy in the sum of \$5,000 dated June 1, 1932, the assignment being dated June 27, 1932, and the assignment of Selma Steventon of the policy in the sum of \$10,000 dated on or about the 9th day of March, 1932, the assignment being dated June 27, 1932, both assignments being to the plaintiff. Plaintiff then rested and defendant moved for dismissal of the case. Following argument by counsel for both sides the Court permitted and ruled that the answer of the defendant should be considered as amended to deny the execution and delivery of all the policies. Thereupon plaintiff withdrew his submission of the case and defendant withdrew its motion to dismiss the action.

SELMA STEVENTON,

being called as a witness for plaintiff, being first duly sworn, testified as follows:

I am the sister of the deceased, Walter E. Frey. I recognize Plaintiff's Exhibits 3 and 4 (policies 4,591,472 and 4,591,473) as being copies of policies which I have seen under the following circumstances: Around April 15 or 16, 1932, Mr. Steinfeld came into the office. He had five or six policies in his hands. He threw them down on my desk and said, "Here are the policies, they are paid for." My brother was there at the time and said, "Gee, that's pretty good, what do you think of that, Selma?" I said, "That's fine." He took the policies and gave them to me and I put them in the safe. Those were the originals of Exhibits 3 and 4. I understood he was connected with the defendant as an agent. The policies were in the safe about a month. Then one day I received a telephone call from Mr. Steinfeld. He first asked for my brother Herbert. He was in Los Angeles at the time. Then he asked for my son, John Steventon, but John was away. So then he spoke to me. He said, "Mrs. Steventon, will you do me a favor?" I said, "Yes, what is it?" He said, "Return those policies, I must have those policies for auditing purposes only, I will return them." I said, "I have no one to send them with." He said, "Can't you get someone, I must have these policies." It was a Saturday morning, I think, and we were quite busy. I said, "All right, Mr. Steinfeld, I will do the best I can." I asked Mr. Straight to take those policies up to Mr. Steinfeld, he wants them for auditing purposes

(Testimony of Selma Steventon.)

only. He said, "All right, I will do that." So I gave them to Mr. Straight and he took them to Mr. Steinfeld. There was no discussion in her conversation with Mr. Steinfeld as to any proposed cancellation of the policies.

I did not know Mr. Steinfeld very long. I considered him a friend of long standing of my brother Herbert, and for that reason I returned the policies to him.

Upon CROSS-EXAMINATION,
the witness testified as follows:

I never paid anything to Mr. Steinfeld.

I did not pay any premiums. I don't know whether Walter Frey ever paid the premium. He brought the policies to us and I thanked him for his kindness. He said, "They are all paid for," and threw them on the desk.

I don't know where Walter Frey was at the time the policies were left. I don't know where he was. The policies remained in the safe during the time they were left in my possession and Mr. Straight reported that he had given them to Mr. Steinfeld, I never saw the policies again.

JOHN I. STEVENTON, being called as a witness for plaintiff, being first duly sworn, testified as follows:

I was, in May and June, 1932, and am now em-

(Testimony of John I. Steventon.)

ployed by San Francisco Milling Company, and am the beneficiary named in one of the policies of insurance here involved. About the 24th or 25th [49] of May, 1932, I came back and my mother, Mrs. Steventon (the preceding witness), told me she had given up these policies to Mr. Steinfeld. I had several telephone conversations with Mr. Steinfeld in which I asked him why he had taken the policies from our organization without an O. K. from Mr. Frey or myself. He stated that he had taken them for auditing purposes and for me not to worry; we were covered with insurance, and he would have the policies back to us in a short time. Mr. Steinfeld did not return the policies. Between May 25 and June 1 I was in touch with Mr. Steinfeld every day. Finally he said it was necessary to have a re-examination of Walter Frey, my uncle. He told us that the examination that Walter Frey took on March 4 or 5, that the time had expired, and they had to have another doctor's examination for the issuance of the second policies. He did not indicate it had anything to do with the first policy. I was present at the time testified by my mother when the policies were left with her by Mr. Steinfeld. I did not see him throw the policies on the desk. Mr. Steinfeld walked into Mr. Frey's office. Mr. Steinfeld said he had paid for them and, further, he had a receipt from the company showing the policies had been paid. The conversation about the assignment occurred after that time, about the 15th or 16th of April. I was away for one or two days, the day

(Testimony of John I. Steventon.)

that Mr. Steinfeld received delivery of the policies from my mother through Mr. Straight. I had a later conversation with Mr. Steinfeld. He asked whether I wanted insurance on Walter Frey's life, and the next morning I notified Mr. Steinfeld that I decided I wanted the policy on Walter E. Frey's life, with me as beneficiary. [50] I don't remember whether an application was made. This conversation took place the latter part of May. And I decided, and told Mr. Steinfeld, that I wanted some insurance on Walter Frey's life, the policies—the ones that were issued as of June 1. The second physical examination of Walter Frey was June 1. Mr. Steinfeld told me over the telephone that Walter Frey had passed the examination 100 per cent.

Upon Redirect Examination,

the witness testified as follows:

I don't know of any application made by Walter Frey for insurance around June 1.

Thereupon plaintiff rested.

Mr. BOLAND: I will now make a motion for dismissal of the case upon the ground that it has not been made to appear by any evidence that there was a delivery of any policy with intent to consummate a contract of insurance. I am referring to all of the policies, instead of naming each one, if I may do it that way, your Honor. There is no evi-

dence that there was any delivery of any of the policies with intent to consummate a contract of insurance. There is no evidence of the acceptance of any of the policies by Walter E. Frey, or by anyone on his behalf, with intent to consummate a contract of insurance. There is no evidence that any premium was paid upon any policy. That no policy was delivered to Walter E. Frey, or to anyone on his behalf, or accepted by him or anyone on his behalf. No policy was delivered to Walter E. Frey or to anyone on his behalf while he was in good health. No policy was accepted by Walter E. Frey or anyone on his behalf while he was in good health. No premium upon any policy was paid by said Walter E. Frey or anyone in his [51] behalf while he was in good health. No policy was delivered to Walter E. Frey or to anyone on his behalf, or accepted by him or by anyone on his behalf, or the premium thereon paid, while Walter E. Frey was in good health.

After argument of the motion, plaintiff asked permission, which was granted, to re-open the case.

HERBERT W. ALLEN,

being called as a witness for plaintiff, being first duly sworn, testified as follows:

I am a duly licensed physician, practicing in San Francisco over thirty years, and am a graduate of Johns Hopkins Medical School. I am in the employ

(Testimony of Herbert W. Allen.)

of defendant, and have been for something over twenty years. I have a personal recollection of making a physical examination of Walter E. Frey about the 4th day of March, 1932. It was the usual insurance examination. The first thing we do is to obtain the applicant's medical history, family history, moral history, etc. Then we make a physical examination which includes the applicant's height, weight, measurements, heart and lungs, a review of his nervous system and an abdominal examination. I made such an examination on or about March 4, 1932. As far as my examination of Walter E. Frey went, I found no evidence of disease. I found him to be in a normal condition of health and so reported to the defendant. On or about June 1, 1932, I again examined Walter E. Frey in a less extensive manner. I examined his heart and I found nothing abnormal that I could detect, which I reported to defendant.

Thereupon defendant's motion for dismissal was renewed and denied, and an exception allowed as to each policy separately.

ADOLPHUS BERGER,

being called as a witness for defendant, being first duly sworn, testified as follows: [52]

I am a physician and surgeon, licensed by the State of California, and have been practicing my profession in San Francisco eight years. Part of

(Testimony of Adolphus Berger.)

that time I was attached to the Coroner's Office as Autopsy Surgeon, for a little over five years. I resigned the first of this year. I was autopsy surgeon in June, 1932, and as such had occasion to perform an autopsy upon the body of Walter E. Frey, on the 4th of June, 1932, at about seven o'clock in the morning. It was stated that he had gone to bed apparently in normal condition the night before and had died sometime during the night, and I examined the body of the one identified to me as Walter Frey at the funeral parlors of N. Bray & Co. on two occasions, first at seven o'clock in the morning, and again later the same day. I determined to my satisfaction the cause of death, which I recorded as acute dilation of the heart, chronic myocarditis, and coronary sclerosis with occlusion, the latter being the immediate cause. I was unable to find any indication of any other pathology, that is, any other disease; no evidence of any injury. I did detect the odor of alcohol from the stomach content, the content of which and the stomach I sent to the chemist attached to the Coroner's office for analysis. Subsequently I examined the same body and again carefully reviewed the condition of the heart, and I confirmed my former opinion as to the cause of death, and so signed the death certificate. I based that conclusion on the following factors in my examination: The finding of that defective pathology, that defective disease, which is not seen in normal health, and the elimina-

(Testimony of Adolphus Berger.)

tion of any other diseases or injuries of any kind. The heart, in itself, was acutely dilated. It was ballooned out in all of its chambers, [53] the heart being a four-chambered organ, filled with blood. The heart, in itself, was about one and one-half times its normal size, with scattered areas throughout of musculatory or fibrous replacement. That is the result of injury to the heart muscle at some previous time. The coronary vessels—those are the vessels which cut off the large artery in the body that supplies the heart muscle with blood, itself, I found to be thickened and hardened. That is termed sclerosis of those vessels. On the left side the immediate branch of the left coronary vessel I found to be completely shut off. That is a condition that cannot exist with life and not show any further damage to that particular portion of the heart. I saw no evidence by its closure that it had caused any acute or very immediate disease. I concluded that the individual had died so quickly that no acute disease as the result of this closure of that vessel could have formed. This I know, from my past experience in the examination of thousands of these types of heart, is a cause for immediate death. The occlusion is the cause for immediate death. I found that the heart was a chronic heart; by that I mean there had been pre-existent disease as distinguished from acute.

Mr. BOLAND: Can you tell us, Doctor, from your experience and your examination of the body,

(Testimony of Adolphus Berger.)

whether this disease could be detected by the ordinary medical examination which would ordinarily be made for insurance companies, or just an ordinary medical examination in your office?

A. In many, many instances that type of heart is entirely missed.

Q. How can it be discovered?

A. There are certain procedures, very technical, that we may go through with. To determine its [54] size, you may find that by X-ray. To determine this particular type of disease might be determined by other technical examinations—electrocardiogram, and various other pulse registrations which are highly technical and do not come into the ordinary course of an examination. I am familiar with the usual type of insurance medical examination. This disease could be very easily not detected by that type of examination. From my experience and the examination made, this disease existed on March 4, April 15 and June 1, and probably existed long prior to March 4. From my experience as a physician, and my examination of the body, Walter Frey was not in good health on April 15.

Upon Cross-Examination

the witness testified as follows:

At the time of this examination I was connected with the Coroner's Office in San Francisco. I did an autopsy to determine the cause of death. Asked if as a representative of the Coroner's Office he was not primarily interested in ascertaining whether or not death was occasioned through natural causes,

(Testimony of Adolphus Berger.)

he said he would not put it that way. It is my duty to find the cause of death. I made two examinations of the body. Between the time of my first examination and the time of my second examination, I did not have any conversation with any one representing the defendant. Prior to giving my testimony today, I spoke with Mr. Boland. The immediate cause of death is the chronic sclerosis with occlusion. I found acute dilatation of the heart. It is correct to say that by acute dilatation of the heart I mean that the heart muscle had relaxed so that the heart at the time of death had expanded and did not contract. It is not true that such dilatation and enlargement is found in the case of any heart that becomes acutely dilated at the time of death. It is not true that any heart that is acutely dilated at the time of death is enlarged. I can tell very closely by the size of the heart, as I find it relaxed after death, what the size of that heart was in normal life. I would not have to [55] weigh it. I think I can accurately determine that fact.

Q. Did you make any examination in this case, Doctor, to ascertain or that would enable you to ascertain the size of that heart which had, as you say, relaxed, and not contracted again at the time of death, what the size was in life?

A. Very close to the size in life. A heart that is acutely dilated, as this heart was, and which you have properly stated is not a dilation but a relaxation, when opened and allowed to empty itself of the contents of its chambers and then brought back to its position as it should normally be, is a very

(Testimony of Adolphus Berger.)

close consideration of what it was in life. Of course, if it is allowed to stand or lay balooned with its clotted blood, we cannot very well tell. That is a routine part of the examination, to cut the heart in such a way that the entire inside of the heart is exposed, and that the entire free blood which is not part of some disease is eliminated from it. I certainly did that in this instance. I was able to ascertain whether or not this heart was in lifetime an enlarged heart. I said it was about one and one-half times the normal heart. I mean to say that if a heart is one and one-half times its normal size at the time of death, and three days before that man passes away that heart is examined by a doctor and he finds the heart to be normal size, it is my opinion that if a heart were enlarged to one and one-half times its normal size that would not be detectable upon examination. In many instances a skilled physician, such as I am, examining the heart of an individual whose heart is enlarged to one and one-half times its normal size, would be unable to detect that enlargement on examination.

Q. Doctor, you are giving us the exceptions. Do you mean to say in general any skilled physician would not be able to detect an outline the size of a heart that is one and one-half times its normal dimensions?

A. That is exactly what I mean to tell you, that he [56] would not in many, many instances.

Q. I am asking you if generally he would be able to ascertain that fact.

(Testimony of Adolphus Berger.)

Mr. BOLAND: I think the witness has answered that question.

A. I don't know what you mean by the word "generally," and I changed it to "many, many instances."

Mr. EISNER: Q. Are there not recognized methods of ascertaining the size of the heart?

A. I think there are.

Q. Can't the size of the heart be outlined?

A. Many times no.

Q. What prevents you in those many times is that they are exceptional times?

A. No.

Q. What would prevent you from outlining and determining the size of a heart on physical examination, giving it your skilled care and attention?

A. The shape of the chest, the position of the heart assumes in the chest, the degree of space between the most anterior surface of the heart and the chest wall, the amount of muscle, the amount of fat, possibly the amount of hair, the type of breathing of the individual while being examined, the position the individual assumes while being examined, and whether or not throughout the examination all these things are taken into consideration, because the change of position, the change of breathing, the change of conditions under which the patient is all will tend to blot out the possible accurate borders of the heart; and whether or not it is percussed so that the actual borders from both left and right sides are determined is questionable; it is questionable

(Testimony of Adolphus Berger.)

whether or not it is all accurately determined on the edges of the heart. I admit that I have missed it on many, many occasions.

Q. Doctor, what was there in your examination here that led you to determine that there was, as you say, a pre-existing condition? What was there about your findings that led you to believe that?

A. The size of the heart, the amount of fibrous replacement in the [57] heart muscle, which is not normal, and which is not acute; by that I mean does not come on within recent limits. The amount of thickening of the coronary vessels; the complete occlusion of the left one; the thickening of the cusps of the valve at the aorta, which is the biggest vessel that leads from the heart, all make it an undoubted chronic heart, a heart which had pathology in it of long duration.

Q. As I understand it, that occlusion that you found was one of recent occurrence: Is that true?

A. I feel that that was the cause of death. The conditions which brought about the occlusion was certainly not of recent origin. If you will pardon me, I have not finished my answer. I would like to finish it. I don't like to make an answer without qualifying it, for fear of being misunderstood. I had started to tell you that I was certain that the condition which brought about the occlusion of this particular vessel was of long duration. The immediate cause of death was the final occlusion; in other words, the vessel, being about the size of a soda straw, could gradually become thickened, and thick-

(Testimony of Adolphus Berger.)

ened so that the lumen of it were probably no larger than the ordinary pin. From that original size I described down to that small size is a long time ailment. The sudden final closure of what is left being acute, that being the final thing that shuts the blood supply off, that, in my opinion, in this particular instance, was the cause of death. It is not a fact that on a physical examination which occurred only four days prior to death there would ordinarily be indications discoverable. It is not true—quite the contrary—that if one had a sclerotic condition, as I described it, of any extended condition, that ordinarily the palpable vessels would also be sclerosed to a certain degree, so as to be determinable. Quite the contrary is ordinarily true. It is not a fact that if a man had a sclerotic or a myocarditic condition such as I found here, and to the extent I have indicated, that individual will suffer from a shortness of breath, [58] ordinarily. It is possibly but not probably true that he will suffer from certain pains. In my opinion, a man with a condition of heart, as I have found this, could have gone about his daily work perfectly happily, with normal exercise, and not be aware of his condition. I don't know what you mean by normal exercise, but I have on hundreds and hundreds of occasions autopsied individuals whose normal exercise it was to carry hod up a stepladder as hodcarriers, to work in the Union Iron Works as hard laborers, to be bricklayers, and to go along perfectly normally with this type of condition and suddenly drop dead without being in the midst

(Testimony of Adolphus Berger.)

of any of that labor—gone home to eat and dropped dead at the table after putting in eight hours work carrying the hod up a ladder, or working at the Union Iron Works. I have autopsied hundreds and hundreds of those types of cases. The only accurate way in which the existence of the diseased condition, as I have described it, could have been discovered, was by the performance of an autopsy. It is probably true that this sclerotic condition is gradually, you might say, degeneration of the vessels of the heart, which goes along with years, in the case of almost any normal individual, and that is why I told you that the coronary vessels with such sclerosis do not necessarily mean there is sclerosis in the palpable vessels; in fact, sclerosis of vessels, in most instances, has a particular affinity for certain vessels; there can be marked sclerosis of the coronary vessels, and the individual have perfectly soft palpable vessels elsewhere. There can be marked sclerosis of the vessels of the brain to such an extent that the person might die of an apoplexy at any moment, and you will find soft easily pliable vessels in the heart and elsewhere. It has an affinity for certain parts of the body. In many instances it is true that this sclerotic condition is not pathologically designated as a disease of the heart, but is a gradual, you might say, thickening or hardening of the [59] vessels of the heart, which comes along with years. It does not have to be true. We find 80-year-old individuals die who do not have thickening of those vessels, at all. They are just as soft as they would normally be in a young adult.

(Testimony of Adolphus Berger.)

Q. Is it not true that, pathologically speaking, sclerosis of the vessels is not a disease of the heart?

A. I said coronary sclerosis with occlusion; I said nothing about the heart muscles. That is the heart vessel.

Q. In other words, what you found was not, properly speaking a disease of the heart, but a degeneration, a hardening of the vessels.

A. That part of it. I also found a disease of the heart, chronic myocarditis. Chronic myocarditis is not a prevailing sclerotic condition of the vessels of the heart? You are wrong about that. That is a disease of the muscles of the heart. Myocarditis is inflammation of the myocardium, which is muscle of the heart. It has nothing to do with vessels.

Upon Redirect Examination,

the witness testified as follows:

I do not know anyone connected with defendant, except Mr. Boland. My recollection is that he was the first and only one I spoke with in connection with this case, other than those employed in our own office, and that was many months after this autopsy.

HERBERT W. ALLEN,

being recalled as a witness for defendant, being first duly sworn, testified as follows:

I heard the testimony of Doctor Berger. In most instances the condition of the body of Walter Frey, which he described, would not be ascertainable by

(Testimony of Herbert W. Allen.)

me on the usual life insurance medical examination. There are special methods, special examinations of discovering that. These are not ordinarily used in the medical [60] examination for life insurance. If the condition had been disclosed to me, whether on my examination or otherwise, Walter Frey would not have been accepted for insurance by the defendant. He would not have been considered an insurable risk. With ordinary sclerosis, as described by Doctor Berger, Walter Frey would not be in good health on April 25, 1932.

Upon Cross-Examination,
the witness testified as follows:

On my examination, about March 4, 1932, I did examine the palpable arteries. Palpable arteries are those that we feel in the wrist, in the bend of the elbow, on the temples, and in the neck.

Defendant thereupon offered and there was received in evidence, declaration of Walter Frey made June 1, and marked "Defendant's Exhibit A." [61]

THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK
HOME OFFICE: 36-38 NASSAU STREET, NEW YORK CITY, N. Y.

Application for Establishing or Reinstating Policy WITH MEDICAL EXAMINATION JUN 9 - 1932

By the Mutual Life Insurance Company of New York
President
Secretary
Treasurer
Acting Secretary
Acting Treasurer
Acting President
Acting Secretary
Acting Treasurer
Acting President
Acting Secretary
Acting Treasurer

Policy No. 4600 8701 EACH QUESTION MUST BE ANSWERED BY A. R. W. HEROLD JUN 9 - 1932
on the life of Walter E. Gray

I (or we) hereby request The Mutual Life Insurance Company of New York to establish, or (if) since the original due date of the first premium was in default, for since the policy was reinstated, no premium being then in default) if a policy is to be reinstated (a) make any revision to the original application, if a new policy is to be established, or (11) since the original due date of the first premium was in default, for since the policy was reinstated, no premium being then in default) if a policy is to be reinstated (b) Made an application or amendment to the original application for life insurance upon which a policy has not been issued on the plan and premium rate originally applied for, or been released restoration of insurance that would not apply? (If so, give names of companies or associations.) (If not, state "No.") (c) Had any illness, disease, impairment of health, surgical operation, or physical examination or laboratory test, or been prescribed for, treated by or consulted a physician, surgeon or practitioner? (If so, give details of each physician, surgeon or practitioner.) (If not, so state.)

I (or we) agree on my own behalf and on behalf of every person who has or shall have any interest in said policy that the foregoing statements and answers, and the statements and answers made to the questions on this application, are true and are offered to the Mutual Life Insurance Company of New York as an inducement to (a) issue said policy, and (b) issue said policy, and further that the sums are material to the risk which the Company's Medical Examiner as combination of said statements, answers and agreements made in this application upon which said policy is to be issued, and those made to the Company's Medical Examiner as combination of said application.

All communications should be sent to the following Post Office address: 500 Perry St City and Number w. C. D. Bay Terrace City Bay Terrace City and Number w. C. D. Bay Terrace City
I certify that the above statements were read, approved, and signed by the insured in my presence. Walter E. Gray this 1 day of June 1932

I certify that the above statements were read, approved, and signed by the person who will pay the premiums, in my presence. Harold Witness Walter E. Gray this 1 day of June 1932

Unless the policy was issued at the instance and request of some one other than the person insured and who will pay the premiums the signature of the insured above will be sufficient.

Form 3577, 2-28-32-9

Name of Insured	Age	Sex	Any existing condition	Date of application	Name of Physician or Practitioner	Address of Physician or Practitioner
<u>Walter E. Gray</u>	<u>34</u>	<u>M</u>	<u>None</u>	<u>June 9, 1932</u>	<u>Dr. J. E. Gray</u>	<u>500 Perry St, Bay Terrace, N. Y.</u>

3. (a) How long have you known the insured? Walter was born in Bay Terrace, N. Y. on June 1, 1902.
(b) How long have you known the insured? Walter was born in Bay Terrace, N. Y. on June 1, 1902.

4. (a) What are insured's present habits in the case of late taking liquor? 2 or 3 drinks at irregular intervals.
(b) Is there any suspicion that he has ever used them to excess? (If so give details.) No

5. Does insured ever use or has he ever used opium, alcohol, cocaine or any narcotic? No

6. Blood Pressure: Systolic 140 Diastolic 85

7. Do careful inquiry and thorough physical examination show any evidence of functional disturbance of:
(a) Brain or nervous system? No
(b) Heart? No
(c) Arteries? No
(d) Respiratory organs? No
(e) Liver or gall bladder? No
(f) Kidneys or other urinary apparatus? No
(g) Other abdominal viscera? No
(h) Genesitic or gony system? No
(i) Urinary system, (middle ear or any part of the body)? No
(j) All other parts of the body (last or present) of other part? (If so, full particulars of nature and extent of such condition.) No

8. If the insured is a woman, is she pregnant? No

9. Do you know that the insured named this street? Yes

10. Carriers that I have this day examined: Walter E. Gray

and that the foregoing questions have been put and the answers of the insured recorded as stated. Insured also states that he was born on the 1st day of January 1872
Introduced and Assured by Walter E. Gray
Dated at Bay Terrace, N. Y. on the 1st day of June 1932 M. D. Harold

REMARKS:
Note to Medical Examiner: If any impairment is found give full details including date-duration-and date of complete recovery.
The Company will pay the medical fee of \$25.00 when the examination of a hospital or independent policy is furnished for the first time. Any subsequent examination will be at the expense of the insured.
By Walter E. Gray Secretary of the Company
By Harold Medical Referee
JUN 1 - 1932
The Medical Dept.
By
By
By Secretary of the Company
By Walter E. Gray

WALTER E. GRAY
BAY TERRACE, N. Y.
JUN 9 - 1932
WALTER E. GRAY
BAY TERRACE, N. Y.
JUN 9 - 1932



(Testimony of Herbert W. Allen.)

It is true, my examination of those palpable arteries was for the purpose of determining whether there was evidence of sclerosis or hardening. That is the method, so far as palpable evidence is discoverable, whether or not sclerosis exists in the peripheral arteries. I examined the heart, so far as I could, to ascertain whether it was an enlarged heart. There are definitely recognized methods and practices known to skilled physicians for the purpose of ascertaining whether or not a heart is normal in size.

Q. Is it not a fact that in the ordinary case, Doctor, if a heart is materially enlarged, that this fact is discoverable by a skilled physician?

A. There are many exceptions.

Q. I am not asking you for exceptions, Doctor, I am asking you if in the ordinary case if a heart is materially enlarged heart, that this fact is discoverable upon examination by a skilled physician.

A. Just what do you mean by the ordinary case?

Q. I mean in the great run and the great majority of cases.

A. No, I think you are wrong. [63]

Q. What do you think is a correct answer, Doctor, respecting that inquiry?

A. I would say no.

Q. Do I understand you correctly, then, that ordinarily a skilled physician cannot ascertain whether or not a man's heart is materially enlarged? Is that your answer to that question?

A. If he has access to all the possible methods he should, yes. I would say no to the question

(Testimony of Herbert W. Allen.)

whether in the ordinary case if a heart is materially enlarged, that fact is discoverable upon examination by a skilled physician. If a skilled physician has access to all the possible methods he can ascertain whether or not a man's heart is materially enlarged. Frey was submitted to me for an examination to find out whether or not he was a good risk from an insurance point of view, and one of the questions and inquiries for me to determine was whether or not he had a sound heart. It is not entirely true that I applied, so far as I knew, the methods of examination of skilled physicians for the purpose of ascertaining whether or not the man's heart was a normal organ. There are technical methods that Doctor Berger mentioned that are not used in the ordinary insurance examination. These methods are not applied unless we have some reason for applying them. I refer to possible events in the applicant's history which would excite a suspicion of possible trouble. The method by which I determine the size of the heart is to try and locate the apex beat, that is, the portion of the heart that impinges against the chest wall. We percuss the side of the heart, and listen with a stethoscope. I applied those three methods in this instance, and according to the examination made to the best of my ability I found Water Frey's heart to be normal. I listened to ascertain whether there were any murmurs, and found no evidence. I took his blood pressure. I don't recall what the figures were. If there was anything abnormal about it I would have [64] called it to the attention of the defend-

(Testimony of Herbert W. Allen.)

ant. It is certainly not true that in a case of any advanced arteriosclerosis or chronic myocarditis the patient would have given some physical symptoms of suffering from such disturbance. He would not be a sufferer from shortness of breath. It is not necessarily at all true that he would have difficulty in engaging in violent physical exercise. He absolutely would not have a symptom of swelling of the feet. It is true, in my opinion, an apparently normal healthy strong robust individual—apparently to all appearances—may engage in violent physical exercise, and it not be discovered until a postmortem examination that he had arteriosclerosis of the coronary vessels and myocarditis. It is not necessarily true, at all, that arteriosclerosis goes along with advancing years. There usually is, ordinarily as years advance, a gradual change in the arteries of the individual, a hardening. This gradual hardening of the arteries is called sclerosis. It is not at all a fact that this gradual hardening of the arteries is not designated a disease. It is a disease.

Q. So, in your opinion, everyone who has a hardening of the arteries gradually with advancing years is a sufferer from a disease of the heart: Is that true?

A. You are making a special case of advance in years.

Q. I am assuming a special case. I am assuming that one has arteriosclerosis in advancing years, is that man a sufferer from a disease of the heart?

A. He does not necessarily suffer from a disease

(Testimony of Herbert W. Allen.)

of the heart, no. I don't quite follow your question; it cannot be answered very accurately the way you put it.

Q. Is it not a fact that pathologically speaking, or from the standpoint of a disease, the hardening of arteries is not considered or classed as a disease?

A. I think it is classed as a disease quite definitely. I never met Doctor Berger. [65]

A. M. MOODY,

being called as a witness for defendant, being first duly sworn, testified as follows:

I am a pathologist. I am a graduate in medicine and licensed to practice medicine and surgery in the State of California. I devote myself to the study of the disease processes, rather than to the treatment of patients. In other words, it is more of a scientific investigation than the mere treatment of diseases as it presents itself in patients. I am connected with the St. Francis Hospital, as a pathologist. I have made somewhat of a study of diseases and troubles of the heart and arteries. While pathologist at the Coroner's Office, I conducted quite a series of observations on coronary diseases and resulting changes in the heart. I heard the testimony of Doctor Berger and Doctor Allen, and I heard Doctor Berger's description of the condition of the body of Walter Frey as he discovered it upon autopsy. I should not consider a person in the con-

(Testimony of A. M. Moody.)

dition which he described to be in good health on the preceding April 5. He might be in apparent good health. I mean he might be in apparent good health, but not in actual good health. I agree with the testimony of the two doctors that it would be easy to miss it by an examining physician. In a way I am familiar with the ordinary type of insurance medical examination. I have never made any insurance examination, however. With my knowledge of that custom and practice, and the condition of this body, as it has been described, I think that condition could be overlooked by an insurance medical examiner. As a matter of fact, I have seen similar conditions many times that have been overlooked by competent medical men. I am not connected in any way with defendant, other than coming here to testify at your request. Other than Doctor Allen, I do not know anyone connected with it in San Francisco. I have spoken to Mr. Boland before my examination today, and he or his [66] representative asked me to come and testify.

LESTER A. STEINFELD,

being called as a witness for defendant, being first duly sworn, testified as follows:

I am an agent for defendant. I solicit applications. I have nothing whatever to do with the issuance of policies. If a policy is issued, I endeavor immediately to get the premium. It is a rule of the company that no policy shall be delivered with-

(Testimony of Lester A. Steinfeld.)

out an inspection receipt, releasing the company from any liability in the event of death, before the check or the money is paid. The inspection receipt has to be delivered or the money paid. I knew Walter Frey for many years, in his lifetime. I took an application from him. It was signed in my presence.

Thereupon there was offered and introduced in evidence, the policy application, which was marked "Defendant's Exhibit B". It was signed on March 4th or 5th. (Here insert). [67]

MEDICAL EXAMINER'S REPORT.

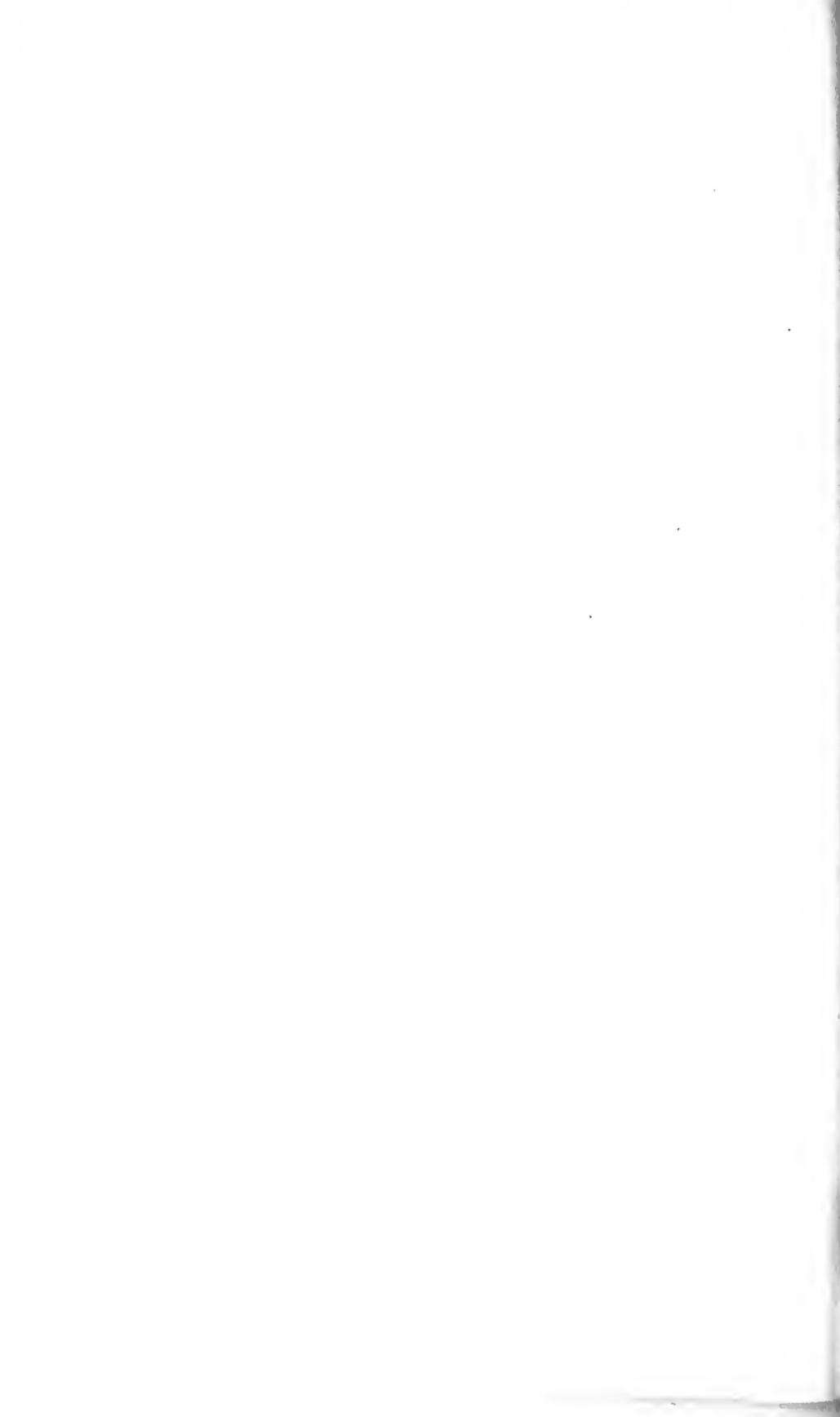
43. How long and how intimately has the insured been married (Give names of Insured)?
 40 years
 44. How long and how intimately has the Insured been married (Give names of Insured)?
 40 years
 45. State the color eyes?
 Blue
 46. State the color hair?
 Black
 47. State the color of skin?
 Fair
 48. State the color of complexion?
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 49. State the color of teeth?
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 50. State the color of lips?
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 51. State the color of nails?
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 52. State the color of palms?
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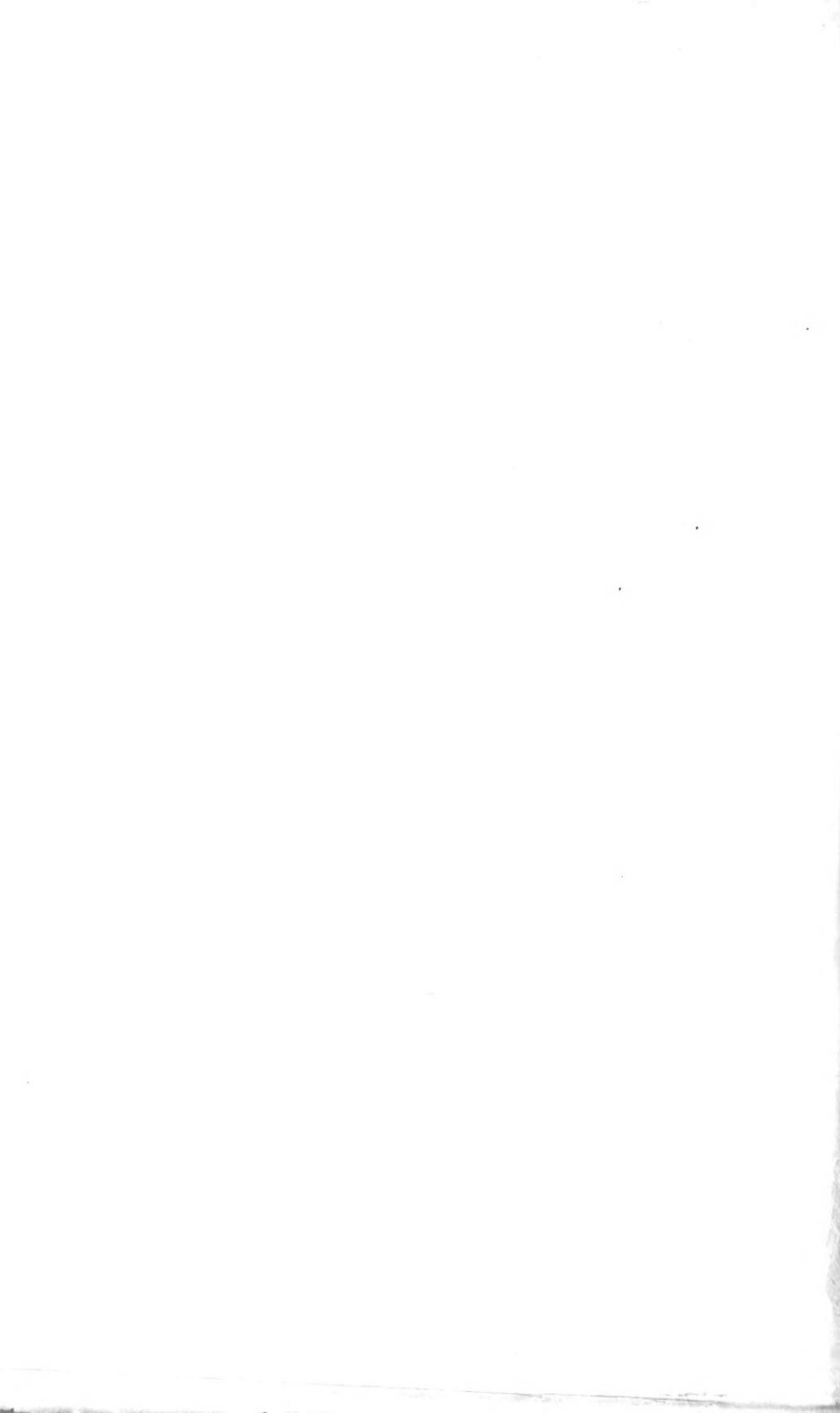
TO BE ANSWERED WHEN THE INSURED IS A WOMAN. Careful inquiry should be made of the Insured before answering these questions.
 86. (a) Has she had any menstrual disorder, or symptoms of excess or excess disease, or any disease of the breast?
 (b) Has she borne any children, if so, how many and date of last confinement?
 (c) Has she ever had any venereal troubles in labor?
 (d) Has she ever had any abortion or miscarriage?
 (e) Date of marriage?
 (f) Has she passed the climacteric?
 If so, give date and cause of each.
 (f) Is she now pregnant? (If so, what month?)

Name of Insured Walter E. Frey
 END PART DUE AGE NUMBER DATE AMOUNT PREMIUM
 YRT 15 1947 40 4591471 MAR 8 1932 35000 0
 YRT 15 1947 40 4591472 MAR 6 1932 10000 0
 YRT 15 1947 40 4591473 MAR 6 1932 10000 0
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Important notice to Medical Examiner.
 This report is the property of this Company and must be delivered or mailed to the Company at once. It is not to be loaned, copied, or otherwise used without the express written consent of the Company. Before sending this report to the Manager of the Company, the Examiner must review it with care and see that every statement is fully warranted.

For Medical Dept. by
 For Inspector of Risks
 Without Special Benefits
 With Special Benefits
 D. L. G. and D. B.
 D. L. G. and W. G.
 D. L. G. only
 D. B. only
 W. of only
 W. L. HATHAWAY, MANAGER,
 19TH FLOOR, HUNTER-DULIN BUILDING,
 SAN FRANCISCO, CAL.
 THE Mutual Life Insurance Company
 of New York
 SEPTEMBER 1938 EDITION (FORM 1934)





(Testimony of Lester A. Steinfeld.)

The WITNESS: (Continuing) The purpose of the insurance was to replace higher priced insurance, and this was going to be a cheaper insurance and it would save the company considerable money. We sent on an application for \$35,000.00 payable to the San Francisco Milling Company and also some personal insurance payable to individuals.

The matter of aviation came up in this way: It was discussed. The matter was complicated by reason of the fact that Walter Frey contemplated making some aviation trips in a private plane that belonged to a foreman of his ranch. He told me that the company got this information and immediately refused to write the insurance on that ground. I don't know if that was the only ground, but they would not issue that insurance on account of that aviation intention of Mr. Frey. [70]

Thereupon there was offered and introduced in evidence, "Defendant's Exhibit C". (Here insert).

Thereupon there was offered and introduced in evidence, "Defendant's Exhibit D". (Here Insert).

Thereupon there was offered and introduced in evidence, "Defendant's Exhibit E". (Here insert).

Thereupon there was offered and introduced in evidence, "Defendant's Exhibit F". (Here insert).

Thereupon there was offered and introduced in evidence, "Defendant's Exhibit G". (Here insert).

The WITNESS (Continuing): Walter E. Frey did not want to sign any blank limiting any liability of the company, but finally we got him to sign that piece of paper (Defendant's Exhibit E) as the only means the company would have of issuing the

(Testimony of Lester A. Steinfeld.)

policy. Upon arrival of the two policies for \$10,000 each, payable to Selma Frey and Herbert E. Frey, I made a trip to the mill. There were present: Herbert Frey and Mrs. Steventon. I said, "Here you are, here are your policies." They looked at them, I said, "Here is a receipt from the company, I paid the money, I didn't take any chances that the company might recall the policies on me, I have taken it upon myself to pay the premiums, here they are." They looked at them. "The policies are now payable to the sister and the brother, and we are going to assign these policies over to the corporation as you want them." They looked at the assignments. It required four signatures on the assignments. They said, "Certainly you are a great big-hearted fellow to pay our life insurance premiums for us, thank you kindly,"—joking, in a way. We knew each other for a great many years—I mean I knew Herbert for a great many years. The matter went on in a kidding sort of fashion. Mrs. Steventon said, "We don't want these policies, Walter might be feeling good [71] some night and he will jump into a plane of a friend and fly on to Chicago and get killed." They said further, "It is impossible to comply with the requirements of these assignments, we couldn't in a thousand years get Walter's wife to sign those papers." I could see I was not getting anywhere, and was not making any progress, and no one seemed interested in the policies. Anyway, I left them there; they were paid for.

(Testimony of Lester A. Steinfeld.)

Thereupon there was introduced in evidence Defendant's Exhibit "H". (Here insert).

Thereupon there was introduced in evidence Defendant's Exhibit "I". (Here insert).

Thereupon there was offered and introduced in evidence, checks and a memorandum from the bank annexed, "Defendant's Exhibit K." (Here insert).

Referring to "Defendant's Exhibit K", those are checks that were paid to the company when I took the policies out of the company's office. They were handed to Mr. Murray, the cashier. That is my signature. I didn't get any money from the San Francisco Milling Company, or anybody down there, except a lot of good wishes. So I went back to the office and stopped payment on the check. I had written a letter to Mr. Frey—I think before I stopped payment—stating that I had paid the premiums on these two policies myself, they were then in force and I would like to have him favor me with a note. The policies all this time were down there. Quite a lot of time elapsed. I endeavored several times after that to get my money. I communicated many times with plaintiff or Walter Frey or Mrs. Steventon, principally with Herbert, he being the head of the firm and my personal friend. I talked to him about getting my money on the policies, that is, getting them to pay the money on the policies. They never paid it. I talked with Herbert Frey or [72] Mrs. Steventon. I endeavored to get those policies. One day I talked with Mrs. Steventon on the telephone. I told her I must have those policies, auditors are in town; I must have the

(Testimony of Lester A. Steinfeld.)

policies or money. The conversation over the telephone was that Mrs. Steventon received a request from me to send the policies into our company, that the auditor was there and we wanted those policies, and we must either have those policies or the money, and that the policies would be returned to them at any subsequent time they wanted if they complied with the requirements of the company. So she says, "I will send the policies up with Mr. Straight, an employee, and he will give you the policies in the Merchants Exchange Building." I said, "That's fine." I met Mr. Straight and took the policies away from him and turned them into the company. I would say that was probably a period of six weeks to two months subsequent to my original visit when they were given me to deliver. After that I did not have any talk with Walter Frey, or Herbert Frey, or Mrs. Steventon. I dropped the whole thing. I figured it was dead business, and that it was wasting time trying to do anything further. I heard from them again probably two or three weeks subsequent to that. Herbert rang me up and said, "Now, I know what we want to do, we know just what we want to do now, and how much we want to take." He told me how the policies should be made out and what they wanted to do. I said, "Fine, Herb, your instructions will be carried out, but we must have Walter call at our office and furnish us with another examination." He wanted \$5,000 for Jack Steventon, a nephew, \$5,000 to Herbert, and \$10,000 to the San Francisco Milling Company. I said, "All right, Herb, you will get them just the way you want

(Testimony of Lester A. Steinfeld.)

them, but Walter must furnish us a new medical examination." He said, "I don't see why." I said, "All right, you have to do it." He said, "Walter is out of town, he won't be here until next week, but when he comes back to [73] town I will have him go up and see Dr. Allen." I said "All right, fine." This was after I got the policies back. That thing was dead. Then they opened up again. I had given up all hopes entirely of ever doing any business down there. This was about three weeks after the policies were turned over to me. This was about May 15th. I went down to the mill again and said, "Now, Herb, let us have a little signing, you never signed anything yet, let us have a little signing now." He said, "My sister is out of town, I can't pay you any money." I said, "How are you going to settle for these policies?" He said, "I will pay one-third in cash and you can take the San Francisco Milling Company's note for two-thirds." I said "Fine, let me have the one-third cash." He said, "My sister is out of town, she is the cashier, she will not be back until next week, and I can't pay you until she is here." I said, "All right, sign here." I said, "As soon as your brother comes back send him up there and we will attend to the rest of it, and I also promise you, Herbert, that the day your brother comes up there I will personally see that the insurance is put in force. I will promise you that before sundown of that day." That was about May 15th. In due course Walter presented himself for examination and it was completed. The cashier notified me that Walter had furnished us what we call

(Testimony of Lester A. Steinfeld.)

a certificate of health. Policies 4165420 for \$5,000, payable to Herbert Frey; 4615421, \$5,000, payable to Steventon, and 4600870 for \$10,000, payable to Herbert Frey, were delivered to me by the cashier, on June 4. I immediately got on the telephone and talked to Herbert. I told him that the policies had arrived. He said, "I will meet you in an hour up in the Merchants Exchange." I said "Fine, where will I meet you—will I meet you in the grain pit?" He said, "No, I will meet you up in room so and so." I could not quite grasp that. Anyway I met him there in the office of Carl Schultz, an attorney. I met [74] Steventon. He came along with me. When we got there I said, "Here are your policies, boys." We were talking there for about five or ten minutes, and I said, "Is Walter dead?" They said, "Yes, he died last night." I had promised Herbert that I would pay the money for the premium into the company, but I didn't do it. I did make the promises.

Upon CROSS-EXAMINATION,

the witness testified as follows:

I have been in the insurance business since 1909 and have been doing business with the defendant about twenty years. I occasionally use the designation of City Manager of the Mutual Life Insurance Company of New York. There is not any such thing as city manager. The practice is down there of various titles being bestowed upon some of the boys. Some of them take "City superintendent", or "City manager". They don't mean anything

(Testimony of Lester A. Steinfeld.)

from the standpoint of compensation, if that is what you mean. I have probably been using the title of City Manager for ten years. I occasionally address communications under that title. I use the official letterhead of the defendant in writing under the title of City Manager. My office is with the offices of the defendant. I had known Walter and Herbert Frey for ten years. I solicited them for insurance. The deal was to take some less expensive insurance to replace insurance that was more costly. I knew that they were carrying \$55,000 on the life of Walter Frey and approximately a similar amount on the life of Herbert Frey. I endeavored to persuade them to let me write a cheaper insurance in my company. It is not an uncommon practice for an agent to put up some portion of the premium himself and take notes for the balance. If I ever said I would pay the first year's premium, it would certainly mean that I would never be big-hearted enough to put my hand down in my own pocket and pay the premiums without receiving some acknowledgment of indebtedness on their part. [75] I never did say I would pay the first year's premium and carry it for them if they would let me write the insurance. The understanding was always that if the insurance was placed in force by me it would be that I would be willing to pay the premium on that in part, and would take notes for the balance. My commission would amount to forty per cent of the first year's premium. On March 4, 1932, I had the application signed for \$55,000 insurance on the life of Walter

(Testimony of Lester A. Steinfeld.)

E. Frey, \$10,000 payable to Harbert Frey, \$10,000 to Selma Steventon, sister, and \$35,000 to the San Francisco Milling Company. I delivered the application to the cashier's office and asked Walter Frey to submit to a physical examination. He took it and passed. On or about the 8th of March, 1932, the company sent me two policies. A question arose because Walter Frey very frankly said that he wanted us to know that he intended to make an aviation flight with his superintendent in a private plane. I had Walter Frey retract this statement of his intention and write Defendant's Exhibit "E". That letter was written at my instance and partly at my dictation. I delivered the letter to the company. An aviation rider was annexed to the policies. The defendant refused to issue the \$35,000 policy to the San Francisco Milling Company, but I told Herbert Frey, Walter Frey and Selma Steventon that we could accomplish the same thing by having policies issued to individuals and assigned to the company. I gave the defendant my personal check for the premium on the two policies which are payable to Herbert E. Frey and Selma Steventon. I gave a check for the sixty per cent. I received a receipt in full. I brought the policies and the receipt to the San Francisco Milling Company and gave the policies and the fully paid receipt to Selma Steventon and Herbert Frey, the beneficiaries, with the words: "Here you are, here are your policies, here is a receipt from the company, I paid the money, I didn't take any [76] chances that the company might recall the policies on me, I have taken

(Testimony of Lester A. Steinfeld.)

it upon myself to pay the premiums, here they are.”

Plaintiff's Exhibit 5 is a memorandum in my own handwriting written out before I had the application signed. It reads: “Have Equitable Life Insurance policy and Travellers made over into two separate policies on each life. Herbert's policy to be cancelled and replaced with Mutual Life term insurance. Walter's policy to be taken over by Herbert Frey and Selma Steventon to replace Equitable Life Insurance Society's policies.”

I left the policies with Herbert Frey and Selma Steventon and left the receipt with them. I would say that I stopped payment on my checks too, three or four days after I delivered the policies. The check is dated April 11, and the notation from the bank is that it was returned unpaid April 14. Under date of April 16, two days later, I wrote and sent Plaintiff's Exhibit 6.

Plaintiff's Exhibit 6 was thereupon introduced in evidence and is as follows. (Here insert.)

I would say that I delivered the policies the preceding night. When I brought the policies out to Herbert Frey and Selma Steventon. I positively do not remember whether I did or did not ask them to sign any such paper as Exhibit J; but the chances are I called their attention to the fact. I have a recollection that I called their attention to them. If I didn't I would have lost my job. They were very immaterial, those papers. The most important was the checks. I handed them the policies folded up and in envelopes just as they were handed to me at the cashier's desk when I paid the premium.

(Testimony of Lester A. Steinfeld.)

Several weeks after the policies and the receipt had been in the possession of Herbert Frey and Selma Steventon I called up the San Francisco Milling Company and spoke to Mrs. Steventon. I [77] told her it was necessary to have the policies that day for the reason the auditor was in town and I wanted them for auditing purposes. I also told her it would be necessary to take the policies up or pay the money on them, that if she wanted the policies later on we would be able to return them to her at any time upon the requirements of the company being complied with. She sent the policies to me and I never returned them.

I was thereafter requested to have the second set of policies issued. For these Walter Frey required a second examination. I promised Herbert that before sundown of the very day Walter came up for this examination the insurance would be put in force. Walter came up for his second examination on the 1st day of June, 1932, and the second set of policies is dated the 1st day of June, 1932. The policies provide that the recurrent premiums are payable on the 1st day of June of each year. The term insurance expires on the 1st day of June, 1947. I should have gotten a note on June 1st for the premium.

GERALD W. MURRAY,

being called as a witness for defendant, being first duly sworn, testified as follows:

(Testimony of Gerald W. Murray.)

I am agency cashier for defendant, in the San Francisco agency. I am in charge of the receipt and release of policies. The defendant is a mutual company. It has no stockholders. In other words, it belongs to the policyholders. Mr. Steinfeld is a soliciting agent. He has no authority whatever to make any contracts or agreements on behalf of defendant. His duties are merely the soliciting of applications and the turning in of the applications to my office.

The COURT: Q. You say he has no authority to do what? [78]

A. He has not any authority to bind the company, or make supplemental contracts.

I have seen Exhibit F and Exhibit D. They come from the Supervisor of Risks from our home office in New York. They come to me. Exhibit G is the same as Exhibits F and D. They come directly to my office from New York. Referring to Exhibit J, these yellow slips are copies of the original which are sent out in advance, in order that we may be posted on the action of the company in the particular cases. They are sent to my office. The policy then comes to my office, and is released to the agent. Slips like Exhibit J ordinarily accompany the policy, along with the original, but there are exceptions to that when they are sent out in advance. The agent has no authority to deliver a policy where there is a stoppage form like Exhibit J, which is given to him at the time the policies are given for delivery. The policy is given to the agent solely on condition that they will obtain

(Testimony of Gerald W. Murray.)

the proper signatures that are required, and acceptance, before delivering the policy. Originals of "Defendant's Exhibit J" accompanied the Frey policies when they were given to Mr. Steinfeld. I might also say that the other condition of delivery of the policy is that he shall collect the premium while the applicant is in good health.

The COURT: Just a moment, I don't think the jury understands the contents of Exhibit J, which was thereupon read:

"New Business. Stoppage Form.

"This advice does not modify or change any existing rules.

"To the Manager of the San Francisco Office:
"From G. Trowbridge, Assistant Secretary and Registrar.

"March 9, 1932.

"The enclosed policy, No. _____, Insured's name Walter E. Frey, must not be delivered or the first premium accepted thereon until and unless the request [79] written below has been executed by the insured. This form when properly executed as above is to be returned to the Registrar's Division at the Home Office, G. Trowbridge, Assistant Secretary and Registrar, The Mutual Life Insurance Company of New York."

It is signed Mutual Life Insurance Company of New York with a blank for the date. Then it says:

(Testimony of Gerald W. Murray.)

“Referring to the above-numbered policies the undersigned hereby accepts the said policies issued as follows:”

With the correct name of the beneficiary as Selma Frey.

The foregoing was referred to in the testimony as “Exhibit J.”

Mr. BOLAND: That is the form which I understand was to be executed.

The COURT: That must be executed upon delivery of the policies.

Mr. BOLAND: Upon the delivery of the policies.

Q. And also the premium paid while the applicant is in good health? A. Yes.

The checks, Defendant’s Exhibit K, were turned in to my office. These checks were deposited in the bank and payment was stopped, and they were returned by the bank to my office.

Upon CROSS-EXAMINATION,
the witness testified as follows:

I stated that defendant has no position of City Manager. I know that Mr. Steinfeld has been using the title of City Manager of defendant. I don’t know how long. It is not the practice of defendant to let the agents adopt titles. The company endeavors to discourage that. So far as we are able to control it, we do not permit it. He is an agent under contract with the company, and has his office with the company. The policies that came out with defendant’s Exhibit “F” were requested to be returned by the company [80] by letter dated in New

(Testimony of Gerald W. Murray.)

York, March 15, and received here on March 18. The policies were returned by me in compliance with the request. The yellow slips introduced as Defendant's Exhibit "J" have reference to the policies that were returned to the company. About April 8, 1932, new policies were sent out by the company accompanying Defendants' Exhibit "G". Those were the policies I turned over to Mr. Steinfeld after I received them in San Francisco.

When the company delivers policies to an agent, he is not personally charged with the premium, but it looks to the agent for the payment. The company has nothing to do with the collection of the initial premium. We look to the agent. The company holds him personally responsible. The second set of policies, dated June 1, 1932, were mailed to me from the New York office. They were mailed from New York in time to be received in San Francisco on June 4, 1932.

Upon REDIRECT EXAMINATION,
the witness testified as follows:

Yellow slips were received accompanying the policies dated June 1st, the second set of policies. The original is to be signed by the insured and the policy cannot be delivered without that acceptance being signed. The policy is not in effect unless it is signed and the insured is in good health.

Exhibit L was introduced in evidence. (Here insert.)

Exhibit L was received in connection with the second set of policies.

(Testimony of Gerald W. Murray.)

The COURT: Q. That is in effect a receipt to be [81] signed by the insured?

A. It is an acceptance of the policy and the original is to be signed by the insured.

Mr. BOLAND: Q. And the policy cannot be delivered without that acceptance being signed, can it? A. No.

Upon RECROSS EXAMINATION,

the witness testified as follows:

Mr. EISNER: Q. Do you mean to say that if the company receives its premium and retains its premium and the insured receives the policy and retains the policy that that policy is not in effect unless the insured has signed that yellow slip (referring to Exhibits J and L)?

A. Yes, and was in good health at the time the policy was delivered and the premium paid.

The COURT: I don't understand part of the witness' testimony.

I will explain that to your Honor. The situation was this: An application was signed on March 4; on March 8 or 9 two policies were sent out by the home office to San Francisco, one for \$10,000 payable to Selma Frey, and one for \$10,000 payable to Herbert Frey. Then the question arose regarding the aviation proclivities of Walter Frey.

Mr. BOLAND: And also the matter of the assignment.

Mr. EISNER: No, only the aviation proclivities of Walter Frey. When that question arose the company sent out this communication from the home

(Testimony of Gerald W. Murray.)

office, from its supervisor of risks, or whatever his designation is, asking for the return of these two policies which had been sent out on March 9th. In compliance with that the witness has testified he sent back those two policies. Then Mr. Steinfeld had Mr. Walter Frey sign a letter regarding aviation, which letter is in evidence, and which was [82] satisfactory to the company, that he would not fly in any but commercial planes, etc., for a period of two years, and they again sent out two policies.

Mr. EISNER: Q. Mr. Murray, on or about March 8 there were sent to you from the home office two policies of life insurance on the life of Walter E. Frey: Is that true? A. Yes.

Q. And those two policies were for \$10,000 each on the life of Walter E. Frey, payable to Selma Frey Steventon and to Herbert E. Frey.

A. Yes, and this memorandum states that the policies must not be delivered until released from the home office.

Q. And on March 15, that same month, you received another communication from your home office? A. Yes.

Q. And that communication constitutes a request to you to return those two policies? A. Yes.

Q. In compliance with that request which you received on March 15, 1932, did you return those two policies to the home office.

A. Yes, that would appear here, and there is nothing in the interim here to show that they were released.

Q. On April 8, 1932, the next month, did the company again send you two policies on the life

(Testimony of Gerald W. Murray.)

of Walter E. Frey, and again payable to Selma Frey Steventon for \$10,000 and to Herbert E. Frey for \$10,000.

A. Yes, it would seem that they apparently gave them the same numbers, omitting the one policy.

Q. Do you mean there were three policies that came first,

A. There were two policies came first.

Q. And two policies came again, A. Yes.

Q. In other words, Mr. Murray, after the company was satisfied regarding the aviation provision they again sent out the policies to you.

A. Yes, according to this. [83]

Q. And after you received these policies for the second time it was then that you received the check from Mr. Steinfeld and you turned the policies over to him?

A. Yes.

Mr. EISNER Does that clarify the matter, your Honor?

The COURT: Yes.

BERNARD KAUFMAN,

being called as a witness for plaintiff, being first duly sworn, testified as follows:

I am a practicing physician in the City of San Francisco, having graduated from Cooper Medical College, in 1909, and took post-graduate work in the University of Chicago, in 1913, and in Europe, for seven years, in Vienna, Paris, London and Berlin. My specialty is diseases of the heart and vessels of

(Testimony of Bernard Kaufman.)

the heart, and am a cardiacalist and heart specialist for the Southern Pacific Hospital in San Francisco, and consultant for the Mount Zion Hospital and the French Hospital, and instructor in medicine at Stanford University. If an autopsy surgeon gave as the cause of death acute dilatation of the heart, chronic myocarditis, and coronary sclerosis, with occlusion, with no infarction present, I would infer the acute dilatation of the heart to be the result of death and not as the result of pre-existing disease; the chronic myocarditis to be the result of the coronary sclerosis. The cause of death would be the acute occlusion of the coronary vessels. With very rare exceptions, acute dilatation of the heart occurs in every death; that is to say, acute dilatation is one of the terminal conditions which occurs in the heart at the time of death. There are perhaps one or two conditions in which such a dilatation does not occur, such, for example, as in chronic bright's disease or in [84] a chronic condition of high blood pressure, the so-called essential condition, the nature of which we do not understand at present; in that case, also, the dilation of the heart is very minimal if it occurs; but with that exception acute dilation of the heart is a terminal condition that results at the time of death. By acute dilation of the heart I mean: Broadly speaking, there are three types of acute dilation of the heart. First of all, there is an acute dilation of the heart which can come about as the result of, for example, I could make your heart dilate actually without doing any harm at all to it, but so that it could be seen to

(Testimony of Bernard Kaufman.)

dilate under the fluoroscope, just by a simple maneuver, that is, have you hold your mouth closed, take a long deep breath, and at the same time try to expel that air out of your lungs, and at the same time closing your nostrils. That will clear up instantly. There is an acute dilation, which is normal in every individual at the time that individual undertakes any effort whatever; that is to say, the first thing that occurs in response to a demand for increased effort on the part of the body is an acute minimal dilation of the heart; it then restores itself to its normal size as previously. On the other hand, there is a condition known as a terminal stage in heart disease, in which there has been a preceding enlargement of the heart as the result of the heart's effort to overcome the diseased condition; the heart enlarges as the result of that effort to compensate for its inefficiency, it becomes larger; ultimately, when the capacity for enlarging the heart has reached its ultimate, then it dilates, and when dilation reaches its physiological maximum death occurs, and then there is a further dilation of the heart. In each case, as I [85] have described, the dilation would be discovered after death, the dilation without enlargement of the heart, that is, without hypertrophy of the heart, a pure dilation of the heart alone is a physiological episode of death. I might elaborate a little so that I can make myself clear. If a person dies, or if one does an autopsy and finds the heart in a dilated condition only, then the evidence is in favor of that dilation being a concomitant of death and not as the result of a pre-

(Testimony of Bernard Kaufman.)

existing heart disease. If, however, one finds at the autopsy evidences of hypertrophy and dilation, then one has the right to presume that there has been a preceding heart disease which has resulted in death, and then a final dilatation. Chronic myocarditis is in essence a misnomer; that is to say, it is a traditional term which has held up until today by reason of an unwillingness on the part of the profession to change it. As a matter of fact, the termination "itis" represents the Latin termination to indicate an inflammation of; for example, appendicitis, an inflammation of the appendix. Myocarditis does occur, that is, there are conditions in which a true myocarditis occurs. For example, in diphtheria, that is a true myocarditis. The term "myocarditis", as used by the profession in describing a heart condition in association with a hardening of the arteries of the heart is a term which has remained in use although recognized by the profession as not in any way evidencing a preceding inflammation of the heart muscle. There are suggestions on the part of a large number of men to change the term and to use a French term for it. That, however, has not found favor with the bulk of the profession. All the authorities who write on the subject use the term "myocarditis" with apologies. Coronary sclerosis is a condition, in the last [86] analysis, of hardening of the coronary arteries of the heart. The term "sclerosis" meaning "hardening of." There is a changed condition, a pathological condition which develops in the coronary arteries whereby the vessels which previously or at birth

(Testimony of Bernard Kaufman.)

are soft and pliable ultimately become, as the result of this degenerating process, hard and more or less brittle.

Q. If I told you, Doctor, that an autopsy surgeon found a heart acutely dilated in all chambers and filled with a dark fluid blood, the heart about one and one-half times its normal size, and there are scattered regions of fibrosis throughout; the coronary vessels of the left side indicate a marked thickening and in the descendens branch about one and one-half inches from its origin there is a complete occlusion by virtue of marked sclerosis of the vessel. There is no acute infarction seen. The coronary vessels of the right side, although thickened to a moderate degree, are in no way comparable to those of the left side. There is some sclerosis at the aortic cusps. The cusps are not flexible. Do these findings necessarily indicate that the person examined was not in good health prior to the time of death?

Mr. BOLAND: I object to the question as not comprehensive of the testimony of Doctor Berger. Doctor Berger indicated in his testimony that he had examined the heart during his autopsy and had excluded all the accumulated blood and came to the conclusion that the heart was one and one-half times its normal size for a long period prior to death, and anterior to the time when the application here was signed. Therefore, the question directed to the witness is not comprehensive, and therefore is objectionable. It does not state the testimony as given by Doctor Berger. [87]

(Testimony of Bernard Kaufman.)

The COURT: Objection overruled; exception.

A. No.

Q. They do not necessarily so indicate?

A. No.

Q. I will ask you if the findings such as I have read to you and indicated to you are ordinary changes in a heart and vessels found in autopsy upon individuals forty years of age, and over?

A. Yes; we can say that it is a rarity to find a person of forty years or over with coronary vessels that are intact. I think the figures given by Von Monkenberg are to the effect that at least 95 per cent. of persons over the age of 40 have coronary arterial hardening—sclerosis—and die of conditions other than due to coronary arterial occlusion or infarction. It is correct to say that such findings do not necessarily indicate that the person examined was not in good health prior to the time of death. According to my understanding, arteriosclerosis, or myocarditis, or both of these together, do not constitute a disease. As an actual fact, from the moment of birth until death there is a progressive deterioration and a series of progressive changes of degeneration which take place in all organs of the body, including the heart and the coronary vessels. From the age of six months on one can find in the arteries of an infant, even, evidence that sclerosis is beginning to occur. As a person lives long enough the sclerosis becomes more marked, until ultimately the sclerosis may develop to such an extent that at autopsy the coronary arteries cannot be cut with a knife, and have to be cut with a scissors, since they

(Testimony of Bernard Kaufman.)

are so markedly hardened—they are actually concrete pipes—lime pipes rather than concrete, they are pipes of lime; yet that person may function and the heart may function perfectly normally and allow them to carry on the normal every day occupation without any evidence of disease and yet at autopsy you find these changes. As a corollary of those changes in the coronary arteries you find corresponding changes which are termed—incorrectly [88] termed—myocarditis—also in proportion to the age of the individual and to the changes which have preceded in the coronary vessels. The extent of these changes vary in different individuals, and these changes are constantly going on in all individuals, and if an autopsy were performed, irrespective of the cause of death, there would be found to one degree or another a certain amount of what I term coronary sclerosis or myocarditis, with one exception so as to be accurate in the matter, there are isolated conditions or isolated cases, rather, in which there seems to be a predilection in the site in which these changes occur in the vessel; for example, in some cases the coronary vessels and the aorta may be relatively intact whereas the vessels of the brain may be markedly involved; or the vessels of the extremities may be markedly involved, or the superficial vessels may be markedly involved and yet the rest of the vessels of the body be only involved to a minor degree. Throughout the body changes of this character are constantly taking place to a greater or less degree throughout the whole of one's life. To the question whether it is possible

(Testimony of Bernard Kaufman.)

for an autopsy surgeon, finding an acutely dilated heart, to determine what was the size of that heart during life, my answer would be no. The reason for my answer is the following, that the size of the heart at autopsy is no criterion for enlargement or lack of enlargement because, in the first place, there is a dilatation that occurs at the time of death, which dilatation may be more or less, as I have previously explained, depending upon whether or not certain diseases are present or absent, and also depending upon if there has been any pre-existing heart disease. On the other hand, for example, in diphtheria, if one sees the heart of a person who [89] has died of diphtheria you only have to look at it to know that that patient died of diphtheria, by reason of the completeness and the magnitude of the dilatation; but that could not allow a person to say whether that heart during life was enlarged, because the criterion that is used to determine whether or not the heart is enlarged, that is, I mean the criterion at the autopsy table, you must use, in order to determine whether or not during the life of the deceased person the heart was enlarged, that is dependent wholly upon the weight of that heart. For example, the normal individual of average height and average weight would have a heart that weighed anywhere from 300 to 350 grams. Experience has proven that the ratio that the weight of the heart bears to the rest of the body shall be not more than .45 per cent. For example, if a heart weighed, say, 200 grams, that would be, under ordinary circumstances, with an ordinary sized man,

(Testimony of Bernard Kaufman.)

a small heart, but in a given case it may represent actual enlargement of that heart if the ratio that this 200 grams bears to the weight of the heart of the deceased is more than .45 of 1 per cent. On the other hand, a person may have a heart that at autopsy is found to weigh 400 grams. That is higher than the normal. Yet that heart may be a normal heart when taken in conjunction with the weight of the deceased, and be not more than .45 of 1 per cent. The criterion for enlargement of the heart is not given in the size of the heart at autopsy table measurements, but by the weight that the heart bears to the rest of the cadaver. To the question whether it is possible for an autopsy surgeon simply to squeeze the heart together, or to squeeze the blood that is in the heart out of it, and to determine from that that the man had a heart enlarged during his lifetime, my answer is I know of no authorities [90] that will allow that method of determining the size of a heart. It is reasonable to expect that if a patient has a materially enlarged heart, for example, one and one-half times normal size, that such a fact would be found by a physical examination, except there be a deformity of the chest wall of such a character that would make a physical examination not an average examination; for example, if the man instead of having the normal curvature of the chest—if he had the normal curvature of the chest then a heart which is one and one-half times the normal size could certainly be found by physical examination; otherwise physical examination would be useless if such a thing as that were not possible.

(Testimony of Bernard Kaufman.)

On the other hand, if the person in question had a chest with a deformity so that the normal contours of the chest were absent, then it would be very difficult to be certain that the heart was one and one-half times its normal size because the normal method would then be subjected to certain modifications which would tend to throw a person off their guard. Under ordinary circumstances, a heart one and one-half times its normal size is a big heart. If I were told that a patient was examined by a competent physician on March 4, 1932, and June 1, 1932, and found to have a normal sized heart, my opinion would be that it was normal. That opinion would not be changed by the findings of an autopsy surgeon after death, that the heart was one and one-half times normal size; because I have previously tried to explain to you that at death there is normally a dilatation of the heart as a concomitant of death, and therefore the enlargement of the heart that the autopsy surgeon found would, in the light of the two examinations by a competent physician previously, must therefore be interpreted as the normal dilatation [91] that has occurred in that individual's heart at the time of death. In my opinion, given the findings of the autopsy surgeon, the cause of death in that case would be acute coronary occlusion; and, unfortunately, I have seen it happen too often that a man in good health could suddenly die, and the same findings be disclosed on autopsy.

Mr. BOLAND: I object to the question as as-

(Testimony of Bernard Kaufman.)

suming certain things that are not in evidence, and other things that are contrary to the evidence.

The COURT: Objection overruled; exception.

A. Yes; I would go further even, if I might on that——

Mr. EISNER: Yes, you may make any explanation you wish.

A. If that heart at the time of physical examination were negative with respect to murmurs, then it is good presumptive evidence that the heart at the time of the examination was not dilated, because one of the most important signs of a dilated heart is the evidence of murmurs. If in this particular case no murmurs were found at the time of the two examinations, it would be presumptive evidence against the dilatation existing at those times.

Q. From the medical examiner's report in evidence in this case I find that upon the examination the pulse rate was found to be 80; is that a normal pulse rate for a man of 40 years of age?

A. At the time of examination for life insurance?

Q. Yes. A. Yes.

Q. I notice that the blood pressure systolic was about 145 and diastolic 85, and the pulse pressure 60; were these normal findings in a man 40 years of age?

A. At the time of the examination for the life insurance, yes. I add, "at the time of the life insurance examination," for the simple reason that there is always [92] an emotional factor, an apprehension and an anxiety at those times that a person might be rejected, and so there is a slight rise

(Testimony of Bernard Kaufman.)

in blood pressure, which life insurance companies and their insurance examiners neglect to take into consideration.

Mr. BOLAND: I move to strike out the latter part of the answer as assuming something not in the evidence.

The COURT: Motion denied; exception.

Upon CROSS-EXAMINATION,
the witness testified as follows:

I was first consulted with reference to my testimony in this case at nine o'clock last night, and charging a fee for my services as expert. I discussed the case with Mr. Eisner, of course, and the only thing I know about the case is from my conversation with Mr. Eisner last night, and the questions which he has put to me today. That is all I know about it.

Q. I understood you to say that a baby from six months old onward has a gradually increasing chance of death?

A. From the moment of birth—not from six months.

Q. I don't think we have to look at a medical book for that. I believe it was placed in another famous book something like this: "In the midst of life we are in death." That is correct, is it not?

A. Yes.

Q. Of course I refer to the New Testament. That is all, Doctor. Thank you.

L. A. STEINFELD,

being recalled as a witness for defendant, being first duly sworn, testified as follows:

I remember the conversation occurring after the policies were left at the mill, concerning the assignment and the aviation clause. There was quite a good deal of talk. This is the con- [93] versation that took place when I got down to the mill the first time with the policies for \$10,000 each and endeavored to get some settlement from the insured in connection with them,—either a note or a check for the premiums on those policies; that is what I went down there for. I presented the policies and was greeted with a reception something like this: “Why, you big-hearted fellow, paying life insurance premiums for us, we are certainly very much obliged to you, who told you to pay the premiums?”—and such remarks as that, kidding me along, because they knew me pretty well. This conversation was about an hour’s duration. I told you what Mrs. Steventon said in connection with the matter. Mrs. Steventon said: “Why, we would be taking a big chance here, Herbert, in taking these policies and cancelling other life insurance that has been in force and taking these policies where there is a clause in the policy, whereas we have an incontestible clause in our policies within two years”—Any life insurance clause is contestible within two years. Mrs. Steventon brought up the point that the new insurance was contestible, and they would be taking a big chance in surrendering old life insurance which had been in force for more than two years

(Testimony of L. A. Steinfeld.)

for one having this aviation clause in it. She remarked: "Walter is liable to be feeling good some night and get into a plane and fly with a friend of his to Chicago." I agreed with her. That was one source of objection why I could not deliver the policies and get my money. Another one was a requirement of the company, the policies being made out to beneficiaries, they were not interested in that, they were interested in corporation life insurance, and I could not get that for them, and in order to accomplish what they had in mind they would have to make the assignment. The assignment called for four signatures. They said, "Why, it's impossible to get Walter's wife to sign these papers, you know that." I could [94] see there was not very much chance of my doing any business that day. There were two very good reasons. That was the day I first made my appearance with the policies, in March.

The COURT: Q. That is the day you left them?

A. That is the day I left them. I left them there and left the receipt there. I took the receipt up a little later. I took that receipt away a couple of days later. I said, "Now, try and fight it out and come to some conclusion about it and see what you can do, the policies are in force, I will see you again."

Q. You had not paid the premium in March on those policies. What is the date of the checks?

A. April 11.

Q. That is when it happened, in April?

A. The checks are dated April 11.

(Testimony of L. A. Steinfeld.)

Q. But you did have a conversation with them in March?

A. That would all be previously.

Q. I want the date clear in my mind.

A. I took those policies down there on the date of those checks.

Q. Did you leave the policies there and then were they taken back to carry the aviation clause or rider?

A. No. When the policies were released to me and delivered to me by Murray, that aviation matter was all past and settled. That had been signed and delivered. The policies were passed to me. I paid the company the money. I immediately proceeded to the mill to get my money, which was the date of that check—in half an hour afterwards, say. I went immediately down there. It must have been in the afternoon, as I remember it.

Q. Did you try and get your money at any time before the 16th? You didn't get it on the day you delivered the policies, did you?

A. No. I made another attempt, and that is where the discrepancy in dates comes in, between the date of the letter and the date of [95] the check. Mr. Eisner brought that out as a discrepancy this morning. I must have gone down the next day, probably, to see Herbert again. I might have seen him at the Merchants Exchange. I don't know where it was. I probably went back at him the very next day to see if they came to any conclusion in connection with the matter.

(Testimony of L. A. Steinfeld.)

Q. You say "conclusion." You delivered the policies and paid the premium; you must have thought they were effective then.

A. Absolutely.

Q. You wanted to find out whether they had come to any conclusion as to the payment?

A. Yes, giving me my compensation. If I had died while that money was in the hands of the company I would have had no recourse against the San Francisco Milling Company, or my estate would not; I didn't have a scrap of paper from them. That is all I was after that day?

Q. What was the amount of those checks?

A. The checks I gave the company in connection with the Walter Frey policy was about \$186; I paid the company 60 per cent. of the net premium.

Q. Defendant's Exhibit I that has been referred to, that is a receipt you take from the insured?

A. No, it is not a receipt. We have a form of receipt, which was furnished by our company, where a policy is left for inspection only. That means where there has been no settlement. If you take out a million dollars worth of life insurance you would not get a receipt for the first premium, the policy is the receipt for the first premium; for every subsequent premium you get a regular company receipt.

Q. I mean a receipt for the policy.

A. Where a policy is left with an applicant and he has not made any settlement on that, the company wants to be protected. It is supposed then

(Testimony of L. A. Steinfeld.)

that that policy should be left with the applicant with the receipt signed, "I hereby receive this policy and it is understood that no obligation [96] is incurred by the company while this policy is in my possession until I pay the premium on same.

Q. That yellow slip is to that effect, is it?

A. No, it has nothing to do with that, at all. Inasmuch as I had already paid the premium to the company on these policies, I had no hesitancy in giving them the policies. There was not any receipt for elimination of liability on the part of the company. It is not a conditional receipt. That yellow slip is something which came up in the issuance of that policy, but does not appear in the application. Am I correct in that, Mr. Boland? That has nothing more to do with the receipt than I have to do with President Roosevelt. That piece of paper has nothing to do with it; that piece of paper there says there have been certain changes made in the issuance of that policy which are not verified by the photostatic copy of the application.

Mr. EISNER: That is not so at all, Mr. Steinfeld. That speaks for itself, however.

A. (Continuing) The Judge has it there.

The COURT: Q. You said these were left with the policies. A. Yes.

Q. Why?

A. I should have had those signed.

Q. For what reason?

A. For the reason, just as it states on the top,

(Testimony of L. A. Steinfeld.)

there, this insurance policy is not to be delivered until the papers are completed.

Q. Until what is completed?

A. The policies have not been delivered until that piece of paper you have in your hand is signed.

Q. This says: "The enclosed policy or policies in the name of Walter E. Frey must not be delivered or the first premium accepted thereon until and unless request written below has been executed by the insured." That is evidently an instruction to the agent, isn't it?

A. Yes, to the agent. [97]

Q. It also says: "This form when properly executed as above is to be returned to the registrar's division in the home office." It is signed "G. Trowbridge, Assistant Secretary and Registrar." So you should have gotten the signature of Walter Frey when you delivered the policies?

A. Yes.

Q. And if he had been there you probably would have done so?

A. I would have endeavored to.

Q. I just was wondering why you left these.

A. As a matter of fact, I should not have left the policies there. Why did I leave the policies there? They didn't pay me anything for them. I was just going to take a chance that over night, or within twenty-four or forty-eight hours, they would come to an agreement on the matter. If I had been not quite so lax in the matter I would have taken those policies away the day I went down there and then I think these people would have paid the money.

(Testimony of L. A. Steinfeld.)

Q. I didn't know but what there was some particular significance to be attached to the fact that you have these receipts.

A. It is simply part of the procedure of delivering the policy, that those papers are signed, if there are any to be signed in connection at the time the policy is delivered.

Q. It is an instruction to you as to what to do, and it is a signed receipt by the insured that he accepts the policies as issued?

A. As issued, yes.

Upon CROSS-EXAMINATION,
the witness testified as follows:

The policies and the receipt were there for several weeks. The policies were receipt for the premium. The separate receipt that I got from the company was taken away. I think it was there for a couple of days. On April 16, 1932, I wrote a letter. I stated in that letter that the policies are in full force and effect, and that they had the policies fully paid, because I had paid for [98] them. Now, I am going to qualify that statement, too. They were paid for. That portion of the transaction which was not completed was the signing of that exhibit, whatever the number is. Whether that is a legal point, or whether the insurance is in force, I am not a lawyer and I cannot say. The yellow slip is an instruction to the agent.

Mr. EISNER: Q. Look at it and see if it is not addressed to the manager. Were you the manager of the company?

(Testimony of L. A. Steinfeld.)

A. No, I was not.

Q. Then it was not addressed to you, at all, it was addressed to the manager of the company, wasn't it?

A. That is correct; that is what it says there, yes.

Q. It says on this document: "The enclosed policy, No. so and so, insured's name Walter E. Frey, must not be delivered or the first premium accepted thereon until and unless the request below has been executed by the insured. As a matter of fact, the company, itself—the cashier of the company in San Francisco—accepted from you the first premium upon these policies without this being signed, did it not?"

A. It is perfectly customary. I will explain to you why. The agent sets forth with the policy, upon receipt of the policy from the cashier, for these purposes to be completed. It is perfectly optional with the agent to place the money on the counter and take a receipt for the money. The agent could pay the cashier the money on those policies. He can set out for San Jose, if he pleases, and endeavor to deliver them and get his money out of the insured. It is physically impossible for the agent to go to San Jose and get these signed first. That would be impossible.

Q. When you gave the insurance company the policies were paid, were they not,—the premium was paid?

A. I paid the money to [99] the company.

(Testimony of L. A. Steinfeld.)

The WITNESS (Continuing): When I brought those policies down to Mrs. Steventon she mentioned that as one of the dangers of accepting the new insurance, that she was giving up old insurance, and she said "Walter may some night get into a plane with a friend of his and fly to Chicago, or some place." It is correct I said a few moments ago that this matter of aviation had all been settled several weeks before when Walter had written that letter, and that rider had been placed on the policy. The aviation matter was not entirely in the background when I brought the policies there on April 15. There was apparently still a matter of controversy after this letter was written by Walter Frey. I will explain that to you if you would like to have me do it. The aviation matter that was in the background was the matter between the life insurance company and the applicant. That was all threshed out and worked out to the satisfaction of the life insurance company, and they were willing to issue the policy with the restriction the applicant was willing to make, and the applicant was willing to accept it with that restriction. When this aviation matter was opened up again was when I came down to get some money. It was opened up by the fact that when I came to deliver the policies and get a check or a note, or an acknowledgment of indebtedness, one of the reasons was this matter of aviation; the other reason for not giving me a note in settlement was the matter of the assignment. That is all I was down there for. I was down there to put

(Testimony of L. A. Steinfeld.)

myself in a better position than I was in. A check or a note would do it. A note was perfectly good from the San Francisco Milling Company.

Mr. EISNER: Q. You were not willing to take Mr. Frey's word, or Mrs. Steventon's word that the money would be paid to you, without having a note signed?

A. Would you do it? [100]

Q. Yes. And didn't you do it?

A. I did it for two or three days and then I stopped payment on the check. I was liable to have gone out of that door the next minute and been run over by an automobile, then what protection would I have? I would like to qualify that, Mr. Eisner, by one further statement, because apparently you have not the correct impression in this matter. When you say I made no attempt between the time I delivered the policies and the time I telephoned to Mrs. Steventon, that is not so. I was a very constant visitor down there, I spent a good deal of time down there. In fact, I think I wore out two or three pairs of shoes going down there, and all without avail. I was so disgusted with the matter that when the office instructed me to return those policies I didn't want to waste time going down there to get them, I asked Herbert to send them to me. I didn't see Mrs. Steventon every time I went down to the San Francisco Milling Company. I did not always talk in front of Mrs. Steventon, if that is what you mean. There was not any difficulty in seeing Mrs. Steventon. I could look at her as I passed the counter.

(Testimony of L. A. Steinfeld.)

Q. Did you ever say to her, "Give me back these policies, they are not in force, they are not in effect, they are not paid for"?

A. I told her that she had better, as a member of the family, urge the acceptance of those life insurance policies.

The COURT: Q. As a matter of fact, you stopped the payment on the check, so that the insurance company was without any money, wasn't it?

A. Yes.

Q. The premium had not been paid?

A. No.

Q. The policies were out for six or seven weeks?

A. Yes.

Q. Finally the company said to you, "Get those policies"?

A. Yes.

SELMA STEVENTON,

being called as a witness for plaintiff, in rebuttal, being first duly sworn, testified as follows:

When Mr. Steinfeld brought in the policies, about April 15, and laid them on the desk and said, "Here are these policies, they are fully paid for, here is the receipt," nothing was said by [101] me to the effect that I did not want the policies because of the aviation clause; and nothing said to the effect, "We don't want these policies, Walter might go up in an aeroplane one of these nights and go East or some place and be killed and then we would be with-

(Testimony of Selma Steventon.)

out insurance." I never heard anything of that kind said by Herbert Frey. I was present. Nothing was said by me to the effect that I did not want the policies because the signature of Walter's wife would be required to the assignment. I never heard Herbert Frey say it. Nothing was said about not wanting to retain and keep the policies. When Mr. Steinfeld 'phoned me, about the 24th of May, he said nothing about wanting the policies or the money. From the time Mr. Steinfeld delivered the policies, they were kept in the safe. I never saw such yellow slips as defendant's Exhibit J. I was not asked to sign any such slips.

HERBERT FREY,

being called as a witness for plaintiff, in rebuttal, being first duly sworn, testified as follows:

I did not tell Mr. Steinfeld when he delivered the policies, about April 15, 1932, that I did not want the policies. I did not hear Mrs. Steventon say, "We don't want these policies, because Walter may take an aviation trip and be killed." I was never asked to sign such yellow slips as defendant's Exhibit J, and did not see any such slips.

The testimony being closed, defendant moved the court for a directed verdict in favor of the defendant as to each policy upon each of the following grounds, and the court assented that defendant

should not be required to repeat the grounds as to each [102] policy as follows:

“That the preponderance of the evidence does not establish that there was any delivery of any policy with intent to consummate a contract of insurance. That the preponderance of the evidence does not establish, in fact, there is no evidence to establish, that there was any delivery of the policy to the insured, Walter E. Frey; in fact, the evidence discloses that he never, so far as the evidence shows, had his hands on the policy or ever knew that it had been left on the table, as testified, and he was the only party to this contract; Mrs. Steventon and Mr. Herbert Frey, etc., are not parties to the contract at all; the only contract was between Walter Frey and the defendant insurance company. There was no acceptance of any policy by Walter E. Frey, no premium was paid upon any policy by Walter E. Frey, or by anyone on his behalf, or otherwise. No policy was delivered to Frey, either by manual transmission or with intent to consummate a contract, which is the legal significance of delivery, while he was in good health. No policy was accepted by Walter E. Frey while he was in good health, and no premium on any policy was paid by Walter E. Frey, or by anyone on his behalf while he continued in good health. No policy was ever delivered to Walter E. Frey, or accepted by Walter E. Frey, or premium paid by Walter E. Frey while he was in good health.”

The foregoing motion was denied and an exception allowed.

Thereupon defendant moved that the court, in submitting the case to the jury, direct the jury to bring in a special verdict in connection with the general verdict, as to the various policies, as follows: (Here insert).

Thereupon the court instructed the jury, as follows: [103]

“It now becomes the duty of the Court to instruct the jury on the law in this case, and it becomes the duty of the jury to apply the law thus given to them to the facts before them. The jury are the sole judges of the facts.

“It is the duty of the jury to give uniform consideration to all of the instructions herein given, to consider the whole and every part thereof together, and to accept such instructions as a correct statement of the law involved therein.

“There are five policies of life insurance sued upon in this action. All of these policies are upon the life of Walter E. Frey. Two of the policies for \$10,000.00 each were dated March 8, 1932, and three others; one for \$10,000.00 and two for \$5,000.00 each were dated June 1, 1932. The fact of the death of Walter E. Frey is admitted. Presentation of proof of death was waived by the repudiation by defendant of any liability under the policies. The only question presented for your consideration is whether the policies, or any of them, ever went into effect. If you find that any policy or policies did go into effect your verdict should be in favor of the plaintiff on any such policy or policies.

“You must, in your deliberations, and in consid-

ering the evidence, and in arriving at your verdict, consider each policy separately. That is to say, you must consider separately as to each policy whether it was delivered, whether it was accepted, and also whether it was delivered and accepted and the premium paid thereon while Walter E. Frey continued in good health.

“As to each of the five policies, before you can find a verdict for the plaintiff you must be satisfied and find, by [104] a preponderance of the evidence, that the particular policy was delivered to and received by the insured or the beneficiary, and also that the first premium was paid during the insured’s continuance in good health.

“I call your attention to the fact that each and every one of the policies in this case contains an acknowledgment of the receipt of the first premium. Such acknowledgment is conclusive evidence of the payment of the premium for the purpose of making the policy binding. Section 2598 of the Civil Code of the State of California reads as follows: ‘An acknowledgment in a policy of the receipt of premium is conclusive evidence of its payment, so far as to make the policy binding, notwithstanding any stipulation therein that it shall not be binding until the premium is actually paid.’

“The Court instructs you that a policy of insurance will, in the absence of evidence to the contrary, be presumed to take effect upon its date.

“You are instructed that in order to constitute a contract, a policy of life insurance to be enforceable or valid must be delivered to and accepted by the insured or beneficiary with the intent that it shall

take effect as a contract. Delivery under any other circumstances does not bind either party. Therefore, if you find in this case that any of the policies of insurance was not so delivered or accepted, then, as to that policy your verdict must be for the defendant.

“The question of delivery is one of intent. Mere manual transmission of a document such as an insurance policy is not sufficient to make it effective. It must be accompanied with the intent of both the given and the taker that it shall be [105] effective as a delivery; and such intent is a necessary and vital element.

“The Court instructs you that delivery of a policy of insurance is effective by sending the policy to an agent of the company for the sole purpose of making delivery to the insured or the beneficiary.

“If it be intended that a policy of insurance should be in force before it is actually handed over, it will be deemed constructively delivered.

“If you find that certain policies were executed and mailed from the home office of the insurance company on June 1st and if you further find that it was the intention of the parties that they should go into effect on that date, then you would be warranted in finding that the policies were delivered on June 1st.

“The Court instructs you that possession of a policy of insurance by the beneficiary is prima facie evidence of its delivery as a valid and existing contract. The plaintiff in this action by producing and putting in evidence the three policies dated the first day of June, 1932, established a prima facie case to

recover upon said policies and the burden of overcoming said prima facie case thereupon shifted to the defendant insurance company.

“Prima facie evidence is sufficient in law to establish the fact, unless rebutted. For example, the mailing of a letter duly stamped and addressed is prima facie evidence of its receipt by the person to whom it is addressed.

Under the provisions of these policies which are before you, with respect to the condition that none of them shall be effective until and unless the policies respectively be delivered and the premiums paid during the continuance in sound health of [106] Walter E. Frey, you are instructed that such provision is a condition precedent to the taking effect of the policy. The effect of these provisions is to make it a condition that the policy shall not take effect or become valid and binding unless the insured was in fact in sound health at the time the policies were delivered (if you find they were delivered). In this aspect the defendant's objection is not made to depend upon fraud or misrepresentation, but upon the fact as to whether or not the applicant's health was good or otherwise. The inquiry then becomes an inquiry as to that fact, and does not depend upon the applicant's knowledge or belief. In other words, it is not claimed that the deceased or his beneficiaries were guilty of any fraud or misrepresentation. The question in this connection for you to decide is whether the deceased was in good health at the time of the delivery of the policies. He was not in good health on June 4th when the last of these policies were actually deliv-

ered, for at that time he was dead. Was it the intention of the parties that the policies should be deemed delivered when they were executed and mailed in New York June 1st and was the deceased in good health at that time.

“If you find that the first two policies for \$10,000 to Selma Steventon and \$10,000 to Herbert E. Frey were delivered to these individuals on or about the 15th day of April, 1932, and that they went into effect at that time, you should consider the question of whether these policies were understood by the parties to be rescinded and cancelled, or whether they were intended to remain in effect. No premiums had been paid on them by the insured or his beneficiaries in spite of request for payment. Assuming that the physical re-possession of the policies was obtained by the insurance company by subterfuge, nevertheless, if [107] it was acquiesced in by the insured and his beneficiaries with the understanding that the policies were cancelled, there should be no recovery on the policies. I may say that I have personally reached no conclusion on the question but I feel that it is my duty to call your attention to it. You should determine whether or not it was the intention of the parties to carry \$20,000 or \$40,000 in behalf of personal beneficiaries. You will recall that there was but one application and it was for \$55,000, \$35,000 of which was in behalf of the business and \$20,000 in behalf of personal beneficiaries. Only the \$20,000 was allowed. Later, six or seven weeks after the delivery of the first policies a

new physical examination was required before the policies dated June 1st were issued. It is for you to say in the light of all the facts and circumstances whether the three policies of June 1st for \$20,000 were intended to be in place of the original two policies aggregating the same amount, or were intended to be in addition to them.

“Walter E. Frey further stipulated in his written application that it is agreed that ‘no agent or other person, except the president, vice-president, a second vice-president, or a secretary of the company (that is, defendant) has power on behalf of the company to bind the company by making any promise respecting benefits under any policy issued hereunder, or accepting any representations or information not contained in the application, or to make, modify or discharge any contract of insurance, or to extend the time for payment of a premium, or to waive any lapse or forfeiture of any of the company’s rights or requirements.’

“You are further instructed that this stipulation was and is binding upon Walter E. Frey, and everyone acting for him [108] or on his behalf, and binding upon the plaintiff in this action.

“In civil cases, the affirmative of the issue must be proved. The affirmative here is upon the plaintiff. Upon plaintiff, therefore, rests the burden of proving all the material allegations of his complaint.

“Preponderance of evidence does not mean the greater number of witnesses, but the greater weight of evidence. Evidence is satisfactory which ordi-

narily produces moral certainty or conviction in an unprejudiced mind. Such evidence alone will justify a verdict. It is not necessary that your minds be free from all doubt.

“If the evidence is contradictory, your decision must be in accordance with the preponderance thereof. It is your duty, however, if possible, to reconcile such contradictions so as to make the evidence reveal the truth. When the evidence, in your judgment, is so equally balanced in weight and quality, effect and value, that the scales of proof hang even, your verdict should be against the party upon whom rests the burden of proof.

“In determining the credibility of witnesses you must consider, among other tests which may suggest themselves to you, whether his testimony is, in itself, contradictory, whether it has been contradicted by other credible witnesses, whether his statements are reasonable or unreasonable, whether they are consistent with the facts established by other evidence, or admitted facts in the case. You may consider the witness; manner of testifying on his examination, the character of his testimony, his interest or absence of interest in the suit, his recollection, whether good or bad, clear or indistinct, concerning the facts to which he testifies, his inclinations or motives, together with [109] his opportunity for knowing of the facts whereof he speaks.

“Of course, it goes without saying that you should not consider that some of the parties are individuals and the other a corporation. We have one law for all. Every one is entitled to exact justice.

“Forms of verdict will be given to you which will be helpful, and which will be self-explanatory. The verdict in federal court, unlike that in a state court, must be unanimous. Your first duty is to select a foreman, who will alone sign the verdict.”

Thereupon defendant objected to the refusal of the court to give the instructions requested by it, as follows, to each of which an exception was allowed:

“In this connection, you are further instructed that the law indulges in the presumption, from the fact that the policy is in the hands of the defendant insurance company, that it was never delivered with the intent that it take effect; and therefore the burden is upon the plaintiff to establish the contrary by a preponderance of the evidence, including the presumption.

“Assuming that you find that delivery was complete, that is, that it was not only manual transmission, also an intent that delivery be effective, then you are further instructed that such delivery may be rescinded; that is, the parties may agree that such delivery shall be of no effect.

“Such rescission of delivery may be established either by parol, that is to say, by verbal agreement between the parties, and not necessarily in writing, or it may be inferred from the conduct of the parties. [110]

“On the 4th day of March, 1932, Walter E. Frey made written application of defendant for three policies of insurance upon his life, one for \$35,000.00, payable to San Francisco Milling Co.; one

for \$10,000, payable to Herbert E. Frey, his brother, and one for \$10,000.00, payable to Selma Frey Steventon. This action does not involve any policy for \$35,000.00, nor is it claimed that any such policy was issued or delivered. In said written application said Walter E. Frey stipulated that 'the proposed policies shall not take effect unless and until delivered to and received by the insured or beneficiary, during the insured's continuance in good health, and unless and until the first premium shall have been paid, during the insured's continuance in good health.' Therefore, as to each policy, before you can find a verdict for the plaintiff, you must be satisfied and find, by a preponderance of the evidence, that the particular policy was delivered to and received by the insured (by which is meant Walter E. Frey) or the beneficiary, during the insured's continuance in good health, and also that the first premium was paid during the insured's continuance in good health; that is to say, you must find as to each policy both that the policy was delivered and also that the premium was paid thereon during the insured's (by which is meant Walter E. Frey) continuance in good health. It is not sufficient to find alone either that the policy was delivered or that the premium was paid while the insured was in good health, but as to each policy you must find, from a preponderance of the evidence, both that the particular policy was delivered and was accepted, and that the premium thereon was paid while Walter E. Frey continued in good health.

“Under the provisions of these policies which are

before [111] you, with respect to the condition that none of them shall be effective until and unless the policies respectively be delivered and the premiums paid during the continuance in sound health of Walter E. Frey, you are instructed that such provision is a condition precedent to the taking effect of the policy. The effect of these provisions is to make it a condition that the policy shall not take effect or become valid and binding unless the insured was in fact in sound health at the time the policies were delivered (if you find they were delivered). In this aspect the defendant's obligation is not made to depend upon fraud or misrepresentation, but upon the fact as to whether or not the applicant's health was good or otherwise. The inquiry then becomes an inquiry as to that fact, and does not depend upon the applicant's knowledge or belief.

“You must not become confused between the question of delivery as such and delivery in sound health. In legal contemplation, the two are quite distinct. I have already instructed you with respect to delivery as such; that is, that it must be accompanied with the intent that delivery be effective. I have also instructed you with respect to delivery in sound health. Therefore, if you should find that there was a delivery with intent that it be effective, under the instructions I have already given you, you must, before you can find a verdict for the plaintiff as to any policy, also find that such delivery with intent to make it effective took place,

and that the premiums were paid thereon while Walter E. Frey was in sound health. And you are further instructed that if you find that either of these is untrue, that is, that there was no delivery with the [112] intent that the same be effective or that such delivery did not take place while Walter E. Frey was in sound health, then your verdict must be for the defendant as to the particular policy under consideration.”

Thereupon the defendant objected to the instructions given by the Court as follows, and as to each of which an exception was allowed:

“The Court instructs you that a policy of insurance will, in the absence of evidence to the contrary, be presumed to take effect upon its date.

“The Court instructs you that delivery of a policy of insurance is effective by sending the policy to an agent of the company for the sole purpose of making delivery to the insured or the beneficiary.

“If it be intended that a policy of insurance should be in force before it is actually handed over, it will be deemed constructively delivered.

“If you find that certain policies were executed and mailed from the home office of the insurance company on June 1st and if you further find that it was the intention of the parties that they should go into effect on that date, then you would be warranted in finding that the policies were delivered on June 1st.

“The Court instructs you that possession of a policy of insurance by the beneficiary is prima facie evidence of its delivery as a valid and existing contract. The plaintiff in this action by producing and putting in evidence the three policies dated the first day of June, 1932, established a prima facie case to recover upon said policies and the burden of over- [113] coming said prima facie case thereupon shifted to the defendant insurance company.

“Was it the intention of the parties that the policies should be deemed delivered when they were executed and mailed in New York June 1st and was the deceased in good health at that time.”

After the jury retired the following occurred:

The COURT: The following note was sent from the Jury to the Court:

“Hon. Judge Kerrigan

“We the Jury in this case request additional instruction having to do with exhibit ‘J’.

“We desire, your Honor, to know if it was essential that these forms be signed by the applicant on delivery of the policies in order to complete the contract. This refers to the first two policies of \$10,000 each #4591472 #4591473.”

“Gentlemen: My answer is No.

“Frank H. Kerrigan, U. S. Dist. Judge.”

Mr. BOLAND: The defendant notes an exception to that.

(The following instruction was also sent to the Jury in connection with the above note:)

“Under the provisions of these policies which are before you, with respect to the condition that none of them shall be effective until and unless the policies respectively be delivered and the premiums paid during the continuance in sound health of Walter E. Frey, you are instructed that the burden of proof is upon the plaintiff; that is to say, the plaintiff must establish to your satisfaction, by a preponderance of the evidence, that [114] at the time of the delivery of the policies, respectively, if you find they were delivered, and the payment of the premium thereon, if you find that the premium was ever paid, that Walter E. Frey continued in good health.”

Thereafter the Jury brought in the following verdict:

“We the Jury in the above-entitled cause find a verdict in favor of the plaintiff and against the defendant, and assess the damages in the sum of \$20,000 on account of policies 4591472-3. We the Jury find in favor of the defendant as to policies 4615420, 4615421 and 4600870.”

Thereupon an exception was allowed to the verdict of the Jury and to the entry of the judgment.

Thereafter plaintiff caused to be served upon defendant a notice of motion, as follows:

“NOTICE OF MOTION TO AMEND
JUDGMENT

“To defendant above-named and to Messrs.
Knight, Boland and Riordan, its attorneys:

“You, and each of you, will please take notice, and you are hereby notified, that on Monday, the 5th day of June, 1933, at 10:00 A. M., or as soon thereafter as counsel can be heard, in the courtroom of the above-entitled Court, plaintiff will move the Court to amend the judgment herein to provide for the recovery by plaintiff of interest at the rate of 7% per annum on \$20,000.00 from the 13th day of June, 1932, in addition to the principal sum of \$20,000.00 and costs.

Dated: May 29, 1933.

“NORMAN A. EISNER

Attorneys for Plaintiff.” [115]

“CARL R. SCHULZ

Thereafter, and pursuant to said notice, and on the day therein mentioned, plaintiff moved the court for an order to amend the judgment herein to provide for the recovery by plaintiff of interest at the rate of 7% per annum on \$20,000.00 from the 13th day of June, 1932, in addition to the principal sum of \$20,000.00 and costs. And the court thereupon granted said motion.

The defendant on the 26th day of June, 1933,

moved the said Court to amend the said verdict and judgment by setting off and crediting thereon the amount of the first year's premium upon the two policies upon which the jury had found in favor of the plaintiff, and the Court did grant the said motion. The following written order was made and entered on the 28th day of June, 1933, amending the said verdict and judgment pursuant to the motion of both plaintiff and defendant:

“The motion of plaintiff to amend the verdict and judgment herein by adding thereto interest at the rate of 7% per annum from June 13, 1932, until May 22, 1933, and the motion of defendant that there be credited upon the amount of said verdict and judgment the sum of \$304.40 on account of the unpaid premiums on said policies having come on for hearing, it is

“ORDERED ADJUDGED AND DECREED that said verdict and judgment be amended and modified as follows: that there be credited upon the amount of said judgment, to-wit: \$20,000, the sum of \$304.40 and that there be added to said judgment so modified and amended, to-wit: \$19,965.60, interest thereon at the rate of 7% per annum from the 13th day of June, 1932, until the 22nd day of May, 1933, said order to be entered nunc pro tunc as of May 22, 1933.

“Dated: June 28, 1933.

“FRANK H. KERRIGAN,
Judge of the United States District Court.” [116]

On the said 28th day of June, 1933, the Clerk of said Court did enter upon said judgment the amendment and modification thereof in the following words:

“Pursuant to an order signed and filed on June 28, 1933, the within judgment is amended, modified and reduced to the sum of \$20,993.87, instead of \$21,318.33.

“WALTER B. MALING, Clerk.”

It is stipulated that the foregoing Bill of Exceptions is true and correct in all respects, that it was proposed within the time allowed by law, that amendments thereto were submitted within the time allowed by law, and that it was settled and allowed within the term of court in which the judgment was entered as extended.

NORMAN A. EISNER

CARL R. SCHULZ

Attorneys for Plaintiff.

F. ELDRED BOLAND

KNIGHT BOLAND & RIORDAN

Attorneys for Defendant.

The defendant having filed its proposed Bill of Exceptions within the time allowed by law, and the plaintiff having submitted his amendments thereto within the time allowed [117] by law, and said Bill

of Exceptions having been examined and found correct in all particulars, and counsel for the respective parties having stipulated thereto, said Bill of Exceptions is hereby settled and allowed within the term of court in which the judgment was entered as extended.

Dated September 12 1933.

FRANK H. KERRIGAN

Judge of the United States District Court.

Due service and receipt of a copy of the within Bill of Exceptions is hereby admitted this 11 day of Sept. 1933.

NORMAN A. EISNER

CARL R. SCHULZ

Attorneys for Plaintiff

[Endorsed]: Filed Sep 12 1933

[118]

[Title of Court and Cause.]

PETITION FOR APPEAL

The Mutual Life Insurance Company of New York, a corporation, defendant in the above entitled action, feeling itself aggrieved by a portion of the verdict and judgment therein reading as follows:

“We, the jury in the above entitled cause, find a verdict in favor of plaintiff and against defendant and assess the damages in the sum of \$20,000.00 on account of policies No. 4591472-3”;

and the judgment on said part of said verdict was entered as of the 22nd day of May, 1933, wherein

a verdict was found for plaintiff in the sum of \$20,000.00, which verdict and judgment therein was subsequently amended by order of the court on June 6, 1933 wherein said verdict and judgment therein was amended to read as follows: "\$19,-695.60 with interest thereon at the rate of seven per cent per annum from June 13, 1932 until May 22, 1933." Defendant herein further feeling itself aggrieved for that in and by said verdict and judgment thereon and the amendment thereto, and for that in the trial of the above entitled action certain errors were committed to the prejudice [119] of defendant, all of which will more in detail appear from the assignments of error which defendant has filed with this petition;

NOW, THEREFORE, comes F. Eldred Boland, Esq., attorney for defendant, and petition the above entitled court for its order allowing said defendant to prosecute an appeal to the Honorable Circuit Court of Appeals of the United States of America, for the Ninth Circuit, under and according to the laws of the United States in that behalf made and provided; and, also, that an order be made fixing the amount of bond and/or security, for costs, which said defendant shall furnish upon said order allowing appeal; and that, also, a transcript of the records and proceedings in this action, duly authenticated, may be sent to said Circuit Court of Appeals; and for such further relief as may be meet in the premises.

F. ELDRED BOLAND

Attorneys for Defendant.

Due service and receipt of a copy of the within
is hereby admitted this 12th day
 of September, 1933.

NORMAN A. EISNER

CARL R. SCHULZ

Attorneys for Plaintiff.

[Endorsed]: Filed Sep 12 1933

[120]

[Title of Court and Cause.]

ASSIGNMENTS OF ERROR.

Comes now defendant, The Mutual Life Insurance Company of New York, a corporation, and in connection with and as a part of its appeal, makes the following assignments of error, which it avers were committed during the trial of the above entitled action and in entering the verdict and judgment therein against this defendant and in favor of the plaintiff; that defendant will rely on the following assignments of error in the prosecution of the appeal herewith petitioned for in the said cause.

I

The court erred in admitting evidence on behalf of the plaintiff as follows:

Plaintiff offered in evidence policy No. 4,615,421, policy No. 4,600,870 and policy No. 4,615,420.

MR. BOLAND: I object to the offer and introduction in evidence upon the grounds, first, that it does not appear that the policies are in conformity with the application which is printed therein. Second: There is no showing that the

premium thereon was paid. Third: It does not appear that any of the policies were delivered. Fourth: Upon the [121] ground that the premium thereon was not paid while the insured was in good health, and that the burden of proof is upon the plaintiff to establish that delivery occurred while the applicant was in good health. Fifth: That the premium was not paid while the application was in good health.

The objection was overruled and exception allowed, and the policies introduced in evidence, and copies of each were annexed to and are a part of the complaint herein.

II

The court erred in admitting evidence on behalf of the plaintiff as follows:

Plaintiff thereupon offered in evidence copies of policies numbers 4,591,472 and 4,591,473, following stipulation of counsel that they were copies of policies dated March 8, 1932, and were furnished by defendant to plaintiff pursuant to an order of this court, that the originals had been destroyed, that the copies of the applications annexed thereto were annexed in error and that the true applications were the same as annexed to the other policies exhibits 1 and 2; that the marks "cancelled" appearing upon the signatures were not upon the originals at the time the policies were in the hands of plaintiff, and that the beneficiary as shown on the original of exhibit 3 was Thelma Frey.

THE COURT: (referring to exhibits 3 and 4) We will consider them as copies of the originals.

MR. BOLAND: As to these, I will make the same [122] objection, if I may do it in that manner, without repeating the grounds of objection.

THE COURT: Yes, you may, of course.

MR. BOLAND: And I add to the objection that these are copies and the original is not accounted for, and there can be no assumption of delivery by the mere fact of possession, and therefore there is no foundation laid for their introduction; also, upon the further ground, as it appears in the policies themselves, the application was for \$35,000, payable to the San Francisco Milling Company, which is not involved here, and the two \$10,000 policies, and not for five policies, and that, therefore, either these policies are not admissible or the plaintiff must be put to his election as to which \$20,000 he will rely upon.

The objection was overruled; exception allowed; policies introduced in evidence and marked "Plaintiff's Exhibit 3" and "Plaintiff's Exhibit 4."

III

The court erred in denying the following motion: At the termination of plaintiff's case, defendant's attorney made the following motion:

MR. BOLAND: I will now make a motion for dismissal of the case upon the ground that

it has not been made to appear by any evidence that there was a delivery of any policy with intent to consummate a contract of insurance. I am referring to all of the policies, instead of naming each one, if I may do it that way, your Honor. There is no evidence that there [123] was any delivery of any of the policies with intent to consummate a contract of insurance. There is no evidence of the acceptance of any of the policies by Walter E. Frey, or by anyone on his behalf, with intent to consummate a contract of insurance. There is no evidence that any premium was paid upon any policy. That no policy was delivered to Walter E. Frey, or to anyone on his behalf, or accepted by him or anyone on his behalf. No policy was delivered to Walter E. Frey or to anyone on his behalf while he was in good health. No policy was accepted by Walter E. Frey or anyone on his behalf while he was in good health. No premium upon any policy was paid by said Walter E. Frey or anyone in his behalf while he was in good health. No policy was delivered to Walter E. Frey or to anyone on his behalf, or accepted by him or by anyone on his behalf, or the premium thereon paid, while Walter E. Frey was in good health.

After argument of the motion, plaintiff asked permission, which was granted, to re-open the case.

HERBERT W. ALLEN,

being called as a witness for plaintiff, being first duly sworn, testified as follows:

I am a duly licensed physician, practicing in San Francisco over thirty years, and am a graduate of Johns Hopkins Medical School. I am in the employ of defendant, and have been for something over twenty years. I have a personal recollection of making a physical examination of Walter E. Frey about the 4th day of March, 1932. It was the usual insurance examination. The first thing we do is to obtain the applicant's medical history, family history, moral history, etc. Then we make a physical examination which includes the applicant's height, weight, measurements, heart and lungs, a review of his nervous system and an abdominal examination. I made such an examination on or about March 4, 1932. As far as my examination of Walter E. Frey went, I found no evidence of disease. I found him to be in a normal condition of health and so reported to the defendant. On or about June 1, 1932, I again examined Walter E. Frey in a less extensive manner. I examined his heart and I found nothing abnormal that I could detect, which I reported to defendant.

Thereupon defendant's motion for dismissal was renewed and denied, and an exception allowed as to each policy separately.

IV

The court erred in overruling defendant's objection to questions as follows:

Q. If I told you, Doctor, that an autopsy surgeon found a heart acutely dilated in all chambers and filled with a dark fluid blood, the heart about one and one-half times its normal size, and there are scattered regions of fibrosis throughout; the coronary vessels of the left side indicate a marked thickening and in the descendens branch about one and one-half inches from its origin there is a complete occlusion by virtue of marked sclerosis of the vessel. [125] There is no acute infarction seen. The coronary vessels of the right side, although thickened to a moderate degree, are in no way comparable to those of the left side. There is some sclerosis at the aortic cusps. The cusps are not flexible. Do these findings necessarily indicate that the person examined was not in good health prior to the time of death?

MR. BOLAND: I object to the question as not comprehensive of the testimony of Doctor Berger. Doctor Berger indicated in his testimony that he had examined the heart during his autopsy and had excluded all the accumulated blood and came to the conclusion that the heart was one and one-half times its normal size for a long period prior to death, and anterior to the time when the application here was signed. Therefore, the question directed to the witness is not comprehensive, and therefore is objec-

tionable. It does not state the testimony as given by Doctor Berger.

THE COURT: Objection overruled; exception.

V

The court erred in denying the motion made by defendant at the termination of the case, as follows:

The testimony being closed, defendant moved the court for a directed verdict in favor of the defendant as to each policy upon each of the following grounds, and the court assented that defendant should not be required to repeat the grounds as to each policy, as follows:

That the preponderance of the evidence does not establish that there was any delivery of [126] any policy with intent to consummate a contract of insurance. That the preponderance of the evidence does not establish, in fact, there is no evidence to establish, that there was any delivery of the policy to the insured, Walter E. Frey; in fact, the evidence discloses that he never, so far as the evidence shows, had his hands on the policy or ever knew that it had been left on the table, as testified, and he was the only party to this contract; Mrs. Steventon and Mr. Herbert Frey, etc., are not parties to the contract at all; the only contract was between Walter Frey and the defendant insurance company. There was no acceptance of any policy by Walter E. Frey, no premium was paid upon any policy by Walter E. Frey, or by anyone on his behalf, or otherwise. No policy

was delivered to Frey, either by manual transmission or with intent to consummate a contract, which is the legal significance of delivery, while he was in good health. No policy was accepted by Walter E. Frey while he was in good health, and no premium on any policy was paid by Walter E. Frey, or by anyone on his behalf while he continued in good health. No policy was ever delivered to Walter E. Frey, or accepted by Walter E. Frey, or premium paid by Walter E. Frey while he was in good health.

The foregoing motion was denied and an exception allowed.

VI

The court erred in failing and refusing to give the following instructions requested by defendant, to each of which [127] an exception was duly allowed:

(A) In this connection, you are further instructed that the law indulges in the presumption, from the fact that the policy is in the hands of the defendant insurance company, that it was never delivered with the intent that it take effect; and therefore the burden is upon the plaintiff to establish the contrary by a preponderance of the evidence, including the presumption.

(B) Assuming that you find that delivery was complete, that is, that it was not only manual transmission, also an intent that delivery be effective, then you are further in-

structed that such delivery may be rescinded; that is, the parties may agree that such delivery shall be of no effect.

(C) Such rescission of delivery may be established either by parol, that is to say, by verbal agreement between the parties, and not necessarily in writing, or it may be inferred from the conduct of the parties.

(D) On the 4th day of March, 1932, Walter E. Frey made written application of defendant for three policies of insurance upon his life, one for \$35,000.00, payable to San Francisco Milling Company; one for \$10,000.00, payable to Herbert E. Frey, his brother, and one for \$10,000.00, payable to Selma Frey Steventon. This action does not involve any policy for \$35,000.00, nor is it claimed that any such policy was issued or delivered. In said written application said Walter E. Frey stipulated that "the proposed policies shall not take effect unless and until delivered to and received [128] by the insured or beneficiary, during the insured's continuance in good health, and unless and until the first premium shall have been paid, during the insured's continuance in good health." Therefore, as to each policy, before you can find a verdict for the plaintiff, you must be satisfied and find, by a preponderance of the evidence, that the particular policy was delivered to and received by the insured (by which is meant Walter E. Frey) or the beneficiary, during the insured's continuance in

good health, and also that the first premium was paid during the insured's continuance in good health; that is to say, you must find as to each policy both that the policy was delivered and also that the premium was paid thereon during the insured's (by which is meant Walter E. Frey) continuance in good health. It is not sufficient to find alone either that the policy was delivered or that the premium was paid while the insured was in good health, but as to each policy you must find, from a preponderance of the evidence, both that the particular policy was delivered and was accepted, and that the premium thereon was paid while Walter E. Frey continued in good health.

(E) Under the provisions of these policies which are before you, with respect to the condition that none of them shall be effective until and unless the policies respectively be delivered and the premiums paid during the continuance in sound health of Walter E. Frey, you are instructed that such provision is a condition precedent to the taking effect of the policy. [129] The effect of these provisions is to make it a condition that the policy shall not take effect or become valid and binding unless the insured was in fact in sound health at the time the policies were delivered (if you find they were delivered). In this aspect the defendant's obligation is not made to depend upon fraud or misrepresentation, but upon the fact as to whether or not the applicant's health was good

or otherwise. The inquiry then becomes an inquiry as to that fact, and does not depend upon the applicant's knowledge or belief.

(F) You must not become confused between the question of delivery as such and delivery in sound health. In legal contemplation, the two are quite distinct. I have already instructed you with respect to delivery as such; that is, that it must be accompanied with the intent that delivery be effective. I have also instructed you with respect to delivery in sound health. Therefore, if you should find that there was a delivery with intent that it be effective, under the instructions I have already given you, you must, before you can find a verdict for the plaintiff as to any policy, also find that such delivery with intent to make it effective took place, and that the premiums were paid thereon while Walter E. Frey was in sound health. And you are further instructed that if you find that either of these is untrue, that is, that there was no delivery with the intent that the same be effective or that such delivery did not take place while Walter E. Frey was in sound health, then your verdict must be for the defendant as [130] to the particular policy under consideration.

VII

The court erred in instructing the jury as follows, as to each instruction so given an exception was duly allowed:

(A) The court instructs you that a policy of insurance will, in the absence of evidence to

the contrary, be presumed to take effect upon its date.

(B) The court instructs you that delivery of a policy of insurance is effective by sending the policy to an agent of the company for the sole purpose of making delivery to the insured or the beneficiary.

(C) If it be intended that a policy of insurance should be in force before it is actually handed over, it will be deemed constructively delivered.

(D) If you find that certain policies were executed and mailed from the home office of the insurance company on June 1st and if you further find that it was the intention of the parties that they should go into effect on that date, then you should be warranted in finding that the policies were delivered on June 1st.

(E) The court instructs you that possession of a policy of insurance by the beneficiary is prima facie evidence of its delivery as a valid and existing contract. The plaintiff in this action by producing and putting in evidence the three policies dated the first day of June, 1932, established a prima facie case to recover upon said policies and the burden of overcoming said prima facie case thereupon shifted [131] to the defendant insurance company.

(F) Was it the intention of the parties that the policies should be deemed delivered when they were executed and mailed in New York

June 1st and was the deceased in good health at that time.

(G) After the jury retired the following occurred:

THE COURT: The following note was sent from the Jury to the Court:

“Hon. Judge Kerrigan

“We the Jury in this case request additional instruction having to do with Exhibit ‘J’.

“We desire, your Honor, to know if it was essential that these forms be signed by the applicant on delivery of the policies in order to complete the contract. This refers to the first two policies of \$10,000 each #4591472 #4591473.”

“Gentlemen: My answer is No.

“Frank H. Kerrigan, U. S. Dist. Judge.”

MR. BOLAND: The defendant notes an exception to that.

VIII

The court erred in accepting and entering the verdict of the jury in favor of plaintiff and against defendant, for the sum of \$20,000.00, to which an exception was duly allowed.

IX

The court erred in entering judgment upon the verdict of the jury, to which an exception was duly allowed. [132]

X

The court erred in amending the judgment by adding interest to the amount thereof, to-wit,

\$19,965.60, at the rate of seven per cent per annum from June 13, 1932, until May 22, 1933.

WHEREFORE, defendant prays that the verdict and judgment thereon may be reversed, and for such other and further relief as the court may deem just and proper.

Dated, Sept 11 1933.

F. ELDRED BOLAND
KNIGHT, BOLAND & RIORDAN,
Attorneys for Defendant.

Due service and receipt of a copy of the withinis hereby admitted this 12 day of September, 1933.

NORMAN A. EISNER
CARL R. SCHULZ
Attorneys for Plaintiff.

[Endorsed]: Filed Sep 12 1933 [133]



[Title of Court and Cause.]

ORDER ALLOWING APPEAL

On reading the petition of The Mutual Life Insurance Company of New York, a corporation, defendant in the above-entitled cause, for an appeal from the judgment herein as prayed in said petition it is,

HEREBY ORDERED that the appeal herein be allowed as prayed for, and it is further ordered that a certified transcript of the record and all proceedings be transmitted to the Circuit Court of Appeals of the United States for the Ninth *Dis-*

trict. It is further ordered that a cost bond on appeal be fixed at the sum of Two Hundred Fifty dollars.

Dated. Sept 12, 1933.

FRANK H. KERRIGAN

Judge of the United States District Court.

[Endorsed]: Filed Sep 12 1933 [134]

[Title of Court and Cause.]

AMENDED PRAECIPE FOR TRANSCRIPT
OF RECORD

To the clerk of the above-entitled court:

Please make up record on appeal heretofore allowed and include therein:

Judgment roll, excepting therefrom all papers on motion for new trial and removal papers, including, however, the complaint and the order for removal.

Bill of exceptions.

Petition for appeal.

Assignments of error.

Order allowing appeal.

Citation on appeal.

Bond on appeal.

Photostatic copy of "Defendant's Exhibit A."

Photostatic copy of "Defendant's Exhibit B."

This praecipe.

Dated, San Francisco, September 13, 1933.

KNIGHT, BOLAND & RIORDAN,

Attorneys for Defendant.

Due service and receipt of a copy of the within is hereby admitted this 13 day of September, 1933.

NORMAN A. EISNER, CARL R. SCHULZ

Attorneys for Plaintiff.

[Endorsed]: Filed Sep 13 1933 [135]

[Title of Court and Cause.]

UNDERTAKING FOR COSTS.

The premium charge on this bond is \$10.00 per annum.

WHEREAS, In an action in the District Court of the United States, for the Northern District of California, a judgment was, on the 22nd day of May, 1933, rendered by the said Court in favor of Herbert E. Frey, Plaintiff in the above-entitled action, and against The Mutual Life Insurance Company of New York, a corporation, defendant in said action, and,

WHEREAS, the said The Mutual Life Insurance Company of New York, a corporation, defendant in said action, is dissatisfied with the said judgment, and is desirous of appealing therefrom to the Circuit Court of Appeals, Ninth Circuit:

NOW, THEREFORE, In consideration of the premises and of such appeal, the UNITED STATES FIDELITY AND GUARANTY COMPANY, a corporation, having its principal place of business in the City of Baltimore, State of Maryland, and having a paid-up capital of not less than Two Million Dollars (\$2,000,000.) duly incorporated under the laws of the State of Maryland,

for the purpose of making, guaranteeing and becoming surety on bonds and undertakings, and having complied with all the requirements of the laws of the State of California and the United States of America respecting such corporations, does hereby undertake in the sum of TWO HUNDRED FIFTY (\$250.) DOLLARS, and promise on the part of the Appellant that said Appellant will pay all damages and costs which may be awarded against said Appellant on said appeal or on a dismissal thereof, not exceeding the aforesaid sum of TWO HUNDRED FIFTY (\$250.) Dollars to which amount it acknowledges itself bound.

The undersigned Surety agrees that in case of any breach of any condition hereof the Court may, upon not less than ten days' notice to the undersigned, proceed summarily to ascertain the amount which the undersigned, as Surety, is bound to pay on account of such breach, and render judgment against it and award execution therefor, not to exceed the sum specified in this undertaking.

IN WITNESS WHEREOF, we have hereunto set our hands and seal this 11th day of September, 1933, at San Francisco, California.

UNITED STATES FIDELITY AND
GUARANTY COMPANY

By ZENA LUSSIER

[Seal]

Attorney-in-Fact.

Approved Sept 12, 1933.

FRANK H. KERRIGAN

U. S. District Judge [136]

State of California,
City and County of San Francisco.—ss.

On this 11th day of September in the year one thousand nine hundred and thirty-three before me, Thomas A. Dougherty a Notary Public in and for the City and County of San Francisco, personally appeared Zena Lussier known to me to be the person whose name is subscribed to the within instrument as the Attorney-in-fact of the UNITED STATES FIDELITY AND GUARANTY COMPANY, and acknowledged to me that he/she subscribed the name of the United States Fidelity and Guaranty Company thereto as principal, and his/her own name as Attorney-in-fact.

[Seal]

THOMAS A. DOUGHERTY
Notary Public in and for the City
and County of San Francisco,
State of California

My Commission Expires Aug. 4, 1935.

[Endorsed]: Filed Sep 12 1933 [137]

District Court of the United States
Northern District of California

CERTIFICATE OF CLERK TO TRANSCRIPT
OF RECORD ON APPEAL

I, WALTER B. MALING, Clerk of the United States District Court, for the Northern District of California, do hereby certify that the foregoing 137 pages, numbered from 1 to 137, inclusive, contain a full, true, and correct transcript of the records and proceedings in the case of *Herbert E. Frey, v.*

The Mutual Life Insurance Company of New York, No. 19303-K, as the same now remain on file and of record in my office.

I further certify that the cost of preparing and certifying the foregoing transcript of record on appeal is the sum of \$22.75 and that the said amount has been paid to me by the Attorney for the appellant herein.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said District Court, this 26th day of September A. D. 1933.

[Seal]

WALTER B. MALING

Clerk.

J. P. Welsh,

Deputy Clerk. [138]

[Title of Court and Cause.]

CITATION ON APPEAL.

United States of America.—ss.

To Herbert E. Frey, Plaintiff:

You are hereby cited and admonished to be and appear in the United States Circuit Court of Appeals, for the Ninth Circuit, to be held in the City and County of San Francisco, State of California, within thirty days from the date of this citation, pursuant to an appeal filed in the Clerk's office for the Southern Division of the United States District Court, for the Northern District of California, whereof the defendant, The Mutual Life Insurance

Company of New York, in the above-entitled cause, is now appellant, and you, as plaintiff in said cause, are now respondent, to show cause, if any there be, why that portion of the verdict and judgment reading as follows:

“We, the jury in the above entitled cause, find a verdict in favor of plaintiff and against defendant and assess the damages in the sum of \$20,000.00 on account of policies No. 4591472-3”;

and which verdict and judgment thereon was amended by order of the court herein. [139]

WITNESS, the Honorable Frank H. Kerrigan, United States District Judge for the Northern District of California, this 12th day of September, 1933.

FRANK H. KERRIGAN,
United States District Judge. [140]

Due service and receipt of a copy of the within is hereby admitted this 12th day of September, 1933.

CARL R. SCHULZ,
NORMAN A. EISNER,

For plaintiff.

[Endorsed]: Filed Sep. 13, 1933. Walter B. Maling, Clerk. By J. P. Welsh, Deputy.

In the United States Circuit Court of Appeals for
the Ninth Circuit.

No. 7297

HERBERT E. FREY,

Plaintiff-Appellee,

vs.

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK, a corporation,
Defendant-Appellant.

STIPULATION OMITTING EXHIBITS
FROM RECORD.

It is hereby stipulated by and between the respective parties hereto, that the amended praecipe filed herein may be further amended so that the policies attached to the original complaint as exhibits may be detached from said complaint, and not become a part of the record herein.

Dated, January 8, 1934.

NORMAN A. EISNER,

CARL R. SCHULZ,

Attorneys for Plaintiff-Appellee.

KNIGHT, BOLAND & RIORDAN,

Attorneys for Defendant-Appellant.

[Endorsed]: Filed Jan. 9, 1934. Paul P. O'Brien,
Clerk.

[Endorsed]: No. 7297. United States Circuit Court of Appeals for the Ninth Circuit. The Mutual Life Insurance Company of New York, a corporation, Appellant, vs. Herbert E. Frey, Appellee. Transcript of Record. Upon Appeal from the District Court of the United States for the Northern District of California, Southern Division.

Filed September 26, 1933.

PAUL P. O'BRIEN,
Clerk of the United States Circuit Court of
Appeals for the Ninth Circuit.



PLAINTIFF'S EXHIBIT NO. 3

Policy No. 4,591,473

Age 40 Page 1

Amount, \$10000.

THE MUTUAL LIFE INSURANCE
COMPANY OF NEW YORK

(First Policy issued February 1st, 1843)

WILL PAY

to the Insured's sister Selma Frey, the Beneficiary, death benefit TEN THOUSAND Dollars, (Face Amount of this Policy) upon receipt of due proof of the death, prior to the Eighth day of March, 1947, (Termination Date) of Walter E. Frey, the Insured.

General Provisions

This Policy also provides for

Optional Modes of Settlement (Section 1),

Annual Dividends (Section 2),

Optional Change to other Forms of Policy
(Section 3),

Grace in Payment of Premiums (Section 4),

Privilege of Reinstatement (Section 5).

Premiums

This Policy is issued in consideration of the application and of the payment of the first premium of One hundred fifty-two and 20/100 Dollars, receipt of which is hereby acknowledged, and of the payment to the Company annually on each Eighth day of March hereafter during the continuance of this Policy of an annually increasing premium in accordance with the Table of Renewal Premiums on page 2.

The succeeding pages 2 and 3 of this Policy are a part of this contract.

IN WITNESS WHEREOF, the Company has caused this Policy to be executed this Eighth day of March, 1932.

DAVID F. HOUSTON, President.

(CANCELLED)

WILLIAM L. SIMRELL, Secretary.

(CANCELLED)

Countersigned (CANCELLED) Registrar.
32-16—Yearly Renewable Term.

Amount of insurance payable at death within 15 years. Convertible to life, limited payment life, or endowment. Annual dividends. Premiums, increasing annually, payable during continuance.

Section 1. Optional Modes of Settlement.

The proceeds of this Policy, if it matures as a death claim, may, if so elected, be settled by one of the following optional Modes of Settlement instead of being paid in one sum:—

Page 2

Option 1.—By the Company's holding the proceeds as a principal sum payable at the death of the payee, the Company meanwhile paying monthly interest (with a final interest payment to the date of such death) at three per cent a year plus participation in excess interest at such rate as the Company may determine for each year;

Option 2.—By payment of equal monthly instalments for the number of years elected, in accordance with the table on page 3. Instalments will be

increased by participation in excess interest over three per cent a year at such rate as the Company may determine for each year;

Option 3.—By payment of equal monthly instalments for five, ten, or twenty years certain, as elected, and for the remaining lifetime of the payee, in accordance with the table on page 3. Instalments for the period certain will be increased by participation in excess interest over three per cent a year at such rate as the Company may determine for each year;

Option 4.—By payment of equal monthly instalments of the amount specified in the election as long as the proceeds, together with interest thereon as provided for in Option 1, shall suffice, with a final payment of any balance less than one such instalment.

Under Option 1 the first interest payment will be due at the end of one month from the date when the proceeds become payable. Under Options 2, 3, and 4, the first instalment will be due when the proceeds become payable.

NOTE.—If requested in the election, payment of interest under Option 1 or of instalments under Option 2, 3, or 4 will be made quarterly, semi-annually, or annually instead of monthly. The first payment of interest under Option 1 will be due at the end of three months, six months, or one year according as interest payments are quarterly, semi-annual, or annual. The first instalment under Option 2, 3, or 4 will in all cases be due when the proceeds become payable.

Method of Election. An option Mode of Settlement can be elected, or a previous election revoked or changed, only by written notice to the Company at its Home Office accompanied by the Policy for endorsement.

NOTE.—When a payee becomes entitled to a single sum, he may elect one of these options.

General Provisions.—Joint or contingent payees may be named under the above options within such limitations as may be prescribed by the Company, except that under Option 3 there cannot be joint payees and the instalments to contingent payees will not be payable beyond the period certain.

These optional Modes of Settlement are not available if a corporation, association, partnership, or estate is the payee, nor if the guaranteed interest payments or instalments will, irrespective of dividends or indebtedness, be less than \$10 each.

If any of the above options has been elected, a supplementary contract bearing the date on which the proceeds of the Policy become payable and providing for the settlement elected will be issued.

Surrender or Transfer of Supplementary Contract.—Unless otherwise specified in the election, neither the supplementary contract nor any of the benefits accruing thereunder shall be transferable or subject to surrender, commutation, or encumbrance, except that at the death of the last surviving payee the then surrender value as defined below shall be payable to the executors or administrators of such payee.

The surrender value of the supplementary contract shall be as follows:

Option 1.—The principal sum with any accrued interest:

Options 2 and 3.—The commuted value, computed at three per cent interest compounded annually, of future instalments certain. Under Option 3 no such surrender may be made during the lifetime of the original payee;

Option 4.—Such part of the proceeds of the Policy and interest thereon as shall not have been paid in instalments.

Section 2. Annual Dividends.

The share of the divisible surplus accruing on this Policy shall be allotted as a dividend annually on each anniversary of its date, the first such dividend being payable only if any premium due on the first anniversary be duly paid.

Each such dividend may be either:—

1. Paid in cash; or,
2. Used toward payment of any premium if the remainder of the premium is duly paid; or,
3. Deposited with the Company at interest within ninety days from date of allotment (called dividend deposit). Interest will be credited at such rate as may be determined by the Company, but never less than three per cent a year, and will be added to existing dividend deposits annually. Dividend deposits existing at the death of the Insured shall be then payable to the beneficiary.

At any time any accumulated dividend deposits may be withdrawn; if not so drawn they shall be

payable at the termination of the Policy.

If none of the options shall be exercised, the dividend will be paid in cash.

Post Mortem Dividend.—Upon the death of the Insured a cash dividend will be credited to this Policy for the fraction of the policy year elapsed before such death.

Section 3. Change to other Forms of Policy.

Option of Change.—Provided this Policy is in full force and no premium is in default, this Policy may be exchanged, without evidence of insurability, on any anniversary of its date occurring during its continuance, including the termination date, or within thirty-one days after the termination date if the Policy was in force on the termination date and if exchanged during the lifetime of the Insured, for a policy on the Ordinary Life, Limited Payment Life, or Endowment Insurance plan, without Double Indemnity or Waiver of Premium, or other special benefit or feature.

General Provisions.—If a change is made under the above provision of this section, the date of the new policy will be the anniversary as of which such change is made. Such new policy will be for the same face amount as this Policy, will be written at the age of the Insured at nearest birthday on such anniversary, and will be at the rate of premium and with the provisions of the policy then in use by the Company.

Section 4. Premiums.

Renewal Premiums.—The premiums by the payment of which this Policy may be renewed yearly

on each anniversary of its date prior to the termination date specified on page 1, are those shown in the following Table:

TABLE OF RENEWAL PREMIUMS PER
\$1,000 FACE AMOUNT OF POLICY

Attained Age Nearest Birthday on Anniversary	Annual Premiums	Attained Age Nearest Birthday on Anniversary	Annual Premiums	Attained Age Nearest Birthday on Anniversary	Annual Premiums
21	\$11.35	36	\$13.92	51	\$22.80
22	11.46	37	14.20	52	24.05
23	11.58	38	14.52	53	25.42
24	11.70	39	14.85	54	26.96
25	11.82	40	15.22	55	28.63
26	11.96	41	15.61	56	30.48
27	12.10	42	16.04	57	32.52
28	12.25	43	16.50	58	34.76
29	12.42	44	17.03	59	37.23
30	12.59	45	17.59	60	39.95
31	12.77	46	18.24	61	42.94
32	12.97	47	18.94	62	46.23
33	13.19	48	19.74	63	49.82
34	13.41	49	20.65	64	53.77
35	13.65	50	21.67		

Semi-annual premium—52% of the annual. Quarterly premium—26½% of the annual. This Policy will terminate on the termination date specified on page 1 but see Section 3 "Change to other Forms of Policy".

The premiums for the face amount of this Policy stated in the Table are based on the net one year term premiums according to the American Experience Table of Mortality assuming interest at the rate of three per cent a year.

General Provisions.—All premiums are payable on or before their due date either at the Home Office of the Company or to any agent of the Company, but only on delivery of a receipt signed by the

Treasurer of the Company and countersigned by the person receiving the premium.

A grace of thirty-one days shall be granted for the payment of each premium after the first, during which days of grace the insurance shall continue in force.

If this Policy shall become payable by the death of the Insured, any unpaid premium or premiums necessary to complete premium payments for the policy year in which such death occurs (including the overdue premium, if death occurs within the days of grace) shall be deducted from the amount payable.

If any premium be not paid before the end of the days of grace, then this Policy shall immediately cease and become void, and all premiums previously paid shall be forfeited to the Company.

Section 5. Reinstatement.

This Policy may be reinstated at any time within five years after default in payment of premium but not later than its termination date, upon evidence, satisfactory to the Company, of the Insured's then insurability and the payment of all overdue premiums with compound interest at the rate of five per cent a year.

Page 3

Section 6. Miscellaneous Provisions.

Residence and Travel.—This Policy is free from restrictions as to residence and travel.

Occupation.—This Policy is free from restrictions as to occupation.

Suicide.—In the event of the self-destruction of the Insured, whether sane or insane, within one year

after the date of issue of this Policy, the amount payable shall be limited to an amount equal to the premiums paid hereon.

Incontestability.—Except for non-payment of premiums, this Policy shall be incontestable after one year from its date of issue unless the Insured dies in such year, in which event it shall be incontestable after two years from its date of issue.

Misstatement of Age.—If the age of the Insured shall have been misstated, the amount payable by the Company shall be such as the premium paid would have purchased at the correct age.

Change of Beneficiary.—Unless otherwise provided by endorsement on this Policy or unless there be an existing assignment of this Policy other than to the Company, the beneficiary may be changed from time to time, while the Policy is in force, by written notice to the Company at its Home Office accompanied by the Policy for endorsement. Such change shall take effect upon endorsement of the Policy by the Company.

The interest of any beneficiary who dies before the Insured shall vest in the Insured unless otherwise provided in this Policy.

Rights of the Insured.—Except as may otherwise be specifically provided in this Policy or by endorsement on this Policy, the Insured may during his lifetime, without the consent and to the exclusion of the beneficiary, receive, exercise, and enjoy every benefit, option, right, and privilege conferred by this Policy or allowed by the Company.

Policy Settlement.—All sums payable by the Company under this Policy shall be payable at the

Home Office of the Company in the City of New York.

In any settlement of this Policy at its maturity as a death claim surrender of the Policy to the Company will be required.

The Contract.—This Policy and the application, copy of which is attached, constitute the entire contract.

All statements made by the Insured shall, in the absence of fraud, be deemed representations and not warranties, and no statement shall avoid or be used in defence to a claim under this Policy unless contained in the written application and a copy of the application is attached to the Policy when issued.

Assignment.—The Company shall not be charged with notice of any assignment of any interest in this contract until the original assignment or a certified copy thereof has been filed with the Company at its Home Office.

The Company assumes no responsibility as to the validity or effect of any assignment.

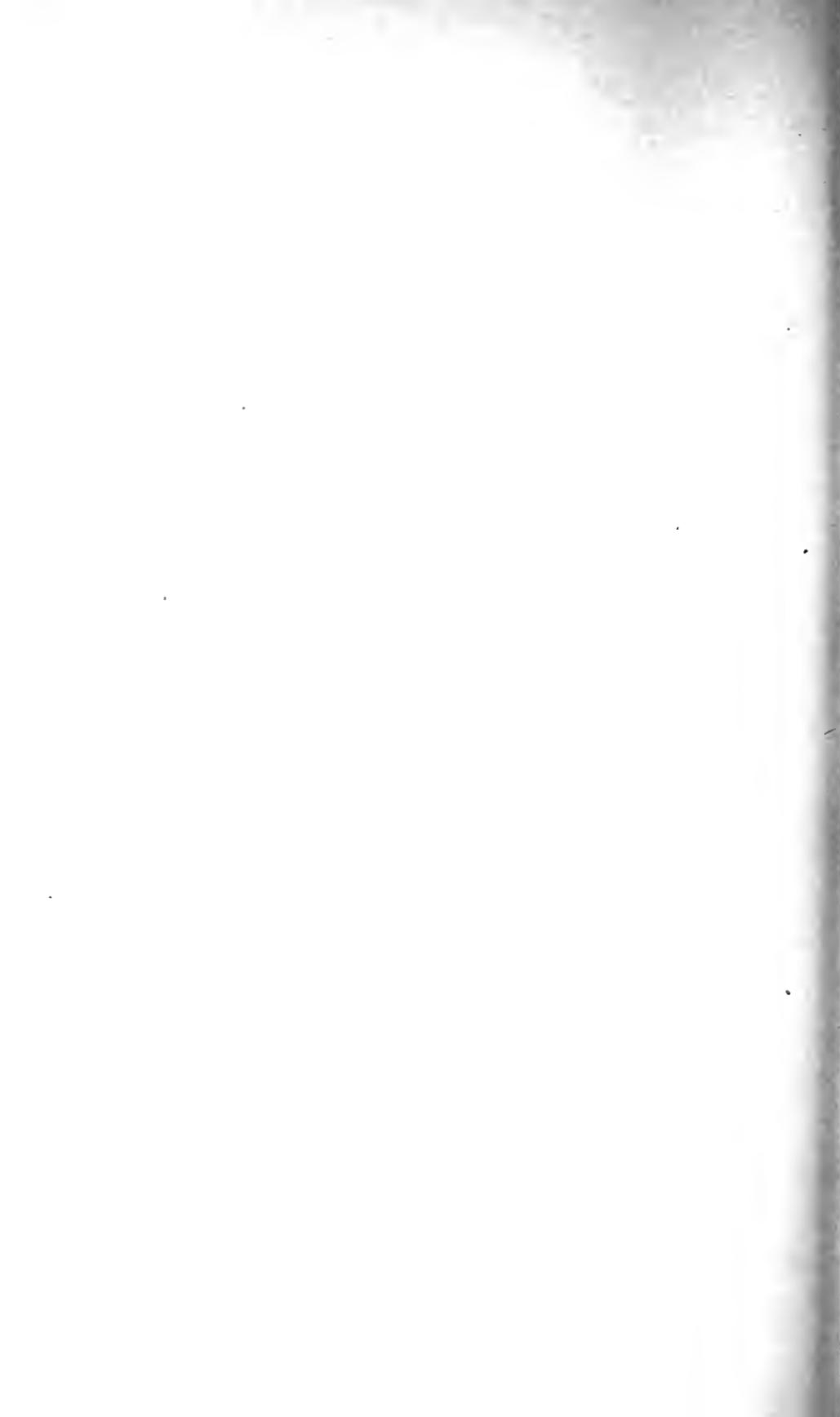
Notice.—No agent or other person except the President, a Vice-President, or a Secretary of the Company has power on behalf of the Company to bind the Company by making any promises respecting benefits or accepting any representations or information not contained in the written application for this Policy, or to make or modify this contract, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the Company's rights or requirements.

Monthly and Annual Instalments for Each \$1,000 of Proceeds of Policy under Optional Modes of Settlement 2 and 3

The semi-annual and quarterly instalments are 50.37% and 25.38% respectively of the annual instalment

OPTION 2				OPTION 3												
Number of Yearly Instalments	Each Monthly Instalment	Instalment Each Annual	Age of Payee When Proceeds Payable	5 Years Certain		10 Years Certain		20 Years Certain		Age of Payee When Proceeds Payable	5 Years Certain		10 Years Certain		20 Years Certain	
				Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment		Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment
3	\$42.66	\$507.39	10 and 11 under	\$3.81	\$44.85	\$3.75	\$44.21	\$3.58	\$42.20	48	\$5.36	\$62.61	\$5.17	\$60.51	\$4.60	\$54.20
3	28.99	343.23		3.83	45.07	3.77	44.41	3.59	42.36	49	5.45	63.63	5.24	61.40	4.65	54.71
4	22.06	261.19	12	3.85	45.30	3.79	44.62	3.61	42.54	50	5.54	64.70	5.32	62.33	4.69	55.24
5	17.91	212.00	13	3.87	45.54	3.81	44.84	3.62	42.71	51	5.64	65.83	5.41	63.30	4.74	55.77
5	15.14	179.22	14	3.89	45.78	3.83	45.07	3.64	42.90	52	5.74	67.02	5.49	64.30	4.78	56.30
7	13.16	155.83	15	3.91	46.03	3.85	45.29	3.65	43.08	53	5.83	68.26	5.58	65.33	4.83	56.84
8	11.68	138.31	16	3.94	46.27	3.87	45.53	3.67	43.27	54	5.97	69.57	5.68	66.44	4.87	57.37
9	10.53	124.69	17	3.96	46.52	3.89	45.76	3.69	43.47	55	6.09	70.95	5.78	67.57	4.92	57.90
10	9.61	113.82	18	3.98	46.77	3.91	45.99	3.70	43.66	56	6.22	72.40	5.88	68.73	4.96	58.43
11	8.86	104.93	19	4.00	47.02	3.93	46.23	3.72	43.87	57	6.35	73.93	5.98	69.98	5.00	58.95
13	8.24	97.54	20	4.02	47.28	3.95	46.48	3.74	44.07	58	6.49	75.53	6.09	71.24	5.05	59.46
13	7.71	91.29	21	4.03	47.55	3.97	46.74	3.76	44.29	59	6.64	77.22	6.21	72.55	5.09	59.96
14	7.26	85.95	22	4.07	47.84	4.00	47.01	3.78	44.52	60	6.80	78.99	6.32	73.91	5.13	60.45
16	6.87	81.33	23	4.10	48.14	4.02	47.29	3.80	44.75	61	6.96	80.85	6.44	75.31	5.17	60.92
16	6.53	77.29	24	4.12	48.45	4.05	47.59	3.82	45.00	62	7.13	82.81	6.57	76.75	5.20	61.37
17	6.23	73.74	25	4.15	48.77	4.07	47.90	3.84	45.25	63	7.31	84.87	6.70	78.23	5.24	61.80
18	5.96	70.59	26	4.18	49.12	4.10	48.23	3.86	45.51	64	7.51	87.03	6.83	79.75	5.27	62.20
19	5.73	67.78	27	4.21	49.47	4.13	48.56	3.89	45.79	65	7.71	89.31	6.96	81.30	5.30	62.59
20	5.51	65.26	28	4.25	49.85	4.16	48.91	3.91	46.07	66	7.92	91.69	7.09	82.89	5.33	62.94
21	5.32	62.98	29	4.28	50.24	4.19	49.28	3.94	46.37	67	8.14	94.19	7.23	84.50	5.36	63.27
22	5.15	60.92	30	4.32	50.65	4.23	49.66	3.96	46.67	68	8.37	96.81	7.37	86.14	5.38	63.57
23	4.99	59.04	31	4.35	51.08	4.26	50.07	3.99	46.99	69	8.61	99.50	7.51	87.79	5.40	63.84
24	4.84	57.33	32	4.39	51.53	4.30	50.49	4.02	47.32	70	8.86	102.43	7.65	89.46	5.42	64.08
25	4.71	55.76	33	4.43	52.01	4.33	50.93	4.05	47.66	71	9.13	105.44	7.79	91.12	5.42	64.08
26	4.59	54.31	34	4.48	52.50	4.37	51.39	4.08	48.01	72	9.40	108.57	7.93	92.79	5.42	64.08
27	4.47	52.98	35	4.52	53.02	4.42	51.87	4.11	48.38	73	9.69	111.84	8.07	94.44	5.42	64.08
28	4.37	51.74	36	4.57	53.56	4.46	52.38	4.14	48.75	74	9.99	115.25	8.21	96.06	5.42	64.08
29	4.27	50.60	37	4.62	54.13	4.51	52.90	4.17	49.14	75	10.30	118.78	8.34	97.65	5.42	64.08
30	4.18	49.53	38	4.67	54.73	4.55	53.45	4.21	49.54	76	10.62	122.44	8.47	99.21	5.42	64.08
			38	4.73	55.36	4.60	54.03	4.24	49.96	77	10.95	126.22	8.59	100.71	5.42	64.08
			40	4.78	56.02	4.65	54.63	4.28	50.38	78	11.29	130.13	8.71	102.14	5.42	64.08
			41	4.84	56.71	4.71	55.26	4.32	50.82	79	11.64	134.14	8.82	103.51	5.42	64.08
			42	4.91	57.43	4.77	55.91	4.35	51.27	80	12.00	138.25	8.92	104.90	5.42	64.08
			43	4.97	58.19	4.83	56.60	4.39	51.73	81	12.36	142.44	8.92	104.80	5.42	64.08
			44	5.04	58.99	4.89	57.31	4.43	52.20	82	12.73	146.70	8.92	104.80	5.42	64.08
			45	5.12	59.83	4.95	58.06	4.48	52.69	83	13.09	151.00	8.92	104.80	5.42	64.08
			46	5.19	60.74	5.02	58.84	4.52	53.18	84	13.46	155.34	8.92	104.80	5.42	64.08
			47	5.27	61.64	5.09	59.65	4.56	53.68	85	13.83	159.67	8.92	104.80	5.42	64.08

and over



QUESTIONS TO BE ANSWERED BY THE PERSON TO BE INSURED

(Whenever the word "insured" is used in this application, it shall be construed as meaning "the person whose life is proposed for insurance.")

THIS APPLICATION is made to THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK here called the Company. All the following statements and answers, of all those that the insured makes to the Company's Medical Examiner, in continuation of this application, are true, and are offered to the Company as an inducement to issue the proposed policy. The insured expressly waives on behalf of himself or herself and of any person who shall have or claim any interest in any policy issued hereunder, all provisions of law forbidding any physician or other person who has attended or examined, or who may hereafter attend or examine the insured, from disclosing any knowledge or information which he thereby acquires. The proposed policy shall not take effect unless and until delivered to and received by the insured, the beneficiary or by the person who herein agrees to pay the premiums, during the insured's continuance in good health and unless and until the first premium shall have been paid during the insured's continuance in good health; except to case a conditional receipt shall have been issued as hereinafter provided.

Name in full of Insured: Herbert E. Frey
 Given Name, Middle Name (if any) and Surname

RESIDENCE OF INSURED	PLACE OF BIRTH OF INSURED	PERIOD OF RESIDENCE
No. Street	In. Mo.	In. Mo.
135 Van Ness S.F. Cal	500 Berry S.F.	

Name of firm or institution of insured: S.F. Milling Co
 Present occupation of insured: at home
 Nature of business of Insured: nothing
 Other occupations of Insured are: (If none, state None)
 Former occupations of Insured: (If none, state None)
 Nature: same

Insured was born: S.F.
 Town or City: S.F.
 State of: Cal
 Country: U.S.A.
 on the 15 day of Nov 1896
 Age of Insured at nearest birthday: 35 years.
 Insured is a Citizen or Subject of: U.S.
 Send all communications to: 500 Berry
 at: S.F.

As stated below in (7), insured does not contemplate either going to a foreign or tropical country, or changing his occupation.

As stated below in (7), insured has not made, nor does he contemplate making, aviation flights or aerial ascensions.

As stated below in (7), regulations for other insurance on life of the Insured, nor any application for reinstatement of insurance on the life of the Insured, are now pending or contemplated.

8. (a) Amount of insurance applied for: \$ 35000
 (b) Premiums to be paid: 20000

9. Plan of insurance (State fully):
Yearly Renewable

10. It is agreed that if the Company is unwilling to issue a policy for the amount applied for, this application shall be for each plan and the amount of insurance applied for.

11. In case of death of insured, the beneficiary shall be: (If none, state None)
 a) Name in full of Beneficiary: Mary E. Frey
 b) P.O. Address: San Francisco Milling Co
 c) Relationship to the Insured: wife

12. The privilege of assigning this policy is hereby reserved to the insured.

13. The right, with all consent, of any person to assign, hypothecate, or otherwise dispose of this policy is hereby reserved to the insured.

14. It is agreed that the insured shall not be liable for the payment of any premium on this policy if the insured shall be unable to pay the same.

16. Except as stated below in (7), no application for life insurance on the life of the insured has ever been declined or post-pended by any company or association.

17. The following is all the insurance now in force on the Insured's life: (If none, state None.)
 Name of Company or Association: Life S Amount: 35000
3000
total 38000

18. Questions 2, 3, 4 and 5 (if none, state None):
no
no
no

2. Level Disability Benefit: no
 3. Double Indemnity Benefit: no
 4. Waiver of Premium Benefit: no

Signature in full of person or persons who will pay the premiums: Mary E. Frey
 Date of: 5.7 + 11.24.1932
 I have known the Insured for 10 years, and have known him/her for 10 years.

STATEMENTS OF THE INSURED TO MEDICAL EXAMINER.

This must be recorded in the handwriting of the insured, who should sign in the presence of the Medical Examiner, and must be true and complete.

1. Is your full name? Herbert E. Frey

2. Have you ever had any illness, diseases, injuries and surgical operations which have been of a serious nature?
no

3. Name of disease, etc., Number of attacks, Time of each, Duration, Complications, and treatment:
no

4. Have you ever had any accident with second or third degree burns or scalds?
no

5. Have you ever had any fracture of a bone?
no

6. Have you ever had any operation?
no

7. Have you ever had any injury to your head?
no

8. Have you ever had any injury to your eyes?
no

9. Have you ever had any injury to your ears?
no

10. Have you ever had any injury to your nose?
no

11. Have you ever had any injury to your throat?
no

12. Have you ever had any injury to your chest?
no

I certify that each and all of the foregoing statements and answers are true and correctly recorded by the Medical Examiner.
 Signature in full of the Insured: Herbert E. Frey



Page 4

No. 4,591,473

THE MUTUAL LIFE INSURANCE
COMPANY OF NEW YORK

Annual Dividend

Convertible

Yearly Renewable Term

Policy

On the Life of

WALTER E. FREY

Amount, - - - - \$10000.

Date, March 8th 1932

Term Insurance until

March 8th 1947

Increasing Premiums.

291 S

Yearly Renewable Term

January, 1932.

Policy No. 4,591,472

Age 40

Page 1

Amount, \$10000.

THE MUTUAL LIFE INSURANCE
COMPANY OF NEW YORK

(First Policy issued February 1st, 1843)

WILL PAY

to the Insured's brother Herbert Frey, the Beneficiary, death benefit TEN THOUSAND Dollars, (Face Amount of this Policy) upon receipt of due proof of the death, prior to the Eighth day of March, 1947, (Termination Date) of Walter E. Frey, the Insured.

General Provisions

This Policy also provides for

Optional Modes of Settlement (Section 1),

Annual Dividends (Section 2),

Optional Change to other Forms of Policy
(Section 3),

Grace in Payment of Premiums (Section 4),

Privilege of Reinstatement (Section 5).

Premiums

This Policy is issued in consideration of the application and of the payment of the first premium of One hundred fifty-two and 20/100 Dollars, receipt of which is hereby acknowledged, and of the payment to the Company annually on each Eighth day of March hereafter during the continuance of this Policy of an annually increasing premium in accordance with the Table of Renewal Premiums on page 2.

The succeeding pages 2 and 3 of this Policy are a part of this contract.

IN WITNESS WHEREOF, the Company has caused this Policy to be executed this Eighth day of March, 1932.

DAVID F. HOUSTON, President.
(CANCELLED)

WILLIAM L. SIMRELL, Secretary.
(CANCELLED)

Countersigned (CANCELLED) Registrar.
32-16—Yearly Renewable Term.

Amount of insurance payable at death within 15 years. Convertible to life, limited payment life, or endowment. Annual dividends. Premiums, increasing annually, payable during continuance.

Section 1. Optional Modes of Settlement.

The proceeds of this Policy, if it matures as a death claim, may, if so elected, be settled by one of the following optional Modes of Settlement instead of being paid in one sum:—

Page 2

Option 1.—By the Company's holding the proceeds as a principal sum payable at the death of the payee, the Company meanwhile paying monthly interest (with a final interest payment to the date of such death) at three per cent a year plus participation in excess interest at such rate as the Company may determine for each year;

Option 2.—By payment of equal monthly instalments for the number of years elected, in accordance with the table on page 3. Instalments will be

increased by participation in excess interest over three per cent a year at such rate as the Company may determine for each year;

Option 3.—By payment of equal monthly instalments for five, ten, or twenty years certain, as elected, and for the remaining lifetime of the payee, in accordance with the table on page 3. Instalments for the period certain will be increased by participation in excess interest over three per cent a year at such rate as the Company may determine for each year;

Option 4.—By payment of equal monthly instalments of the amount specified in the election as long as the proceeds, together with interest thereon as provided for in Option 1, shall suffice, with a final payment of any balance less than one such instalment.

Under Option 1 the first interest payment will be due at the end of one month from the date when the proceeds become payable. Under Options 2, 3, and 4, the first instalment will be due when the proceeds become payable.

NOTE.—If requested in the election, payment of interest under Option 1 or of instalments under Option 2, 3, or 4 will be made quarterly, semi-annually, or annually instead of monthly. The first payment of interest under Option 1 will be due at the end of three months, six months, or one year according as interest payments are quarterly, semi-annual, or annual. The first instalment under Option 2, 3, or 4 will in all cases be due when the proceeds become payable.

Method of Election. An option Mode of Settlement can be elected, or a previous election revoked or changed, only by written notice to the Company at its Home Office accompanied by the Policy for endorsement.

NOTE.—When a payee becomes entitled to a single sum, he may elect one of these options.

General Provisions.—Joint or contingent payees may be named under the above options within such limitations as may be prescribed by the Company, except that under Option 3 there cannot be joint payees and the instalments to contingent payees will not be payable beyond the period certain.

These optional Modes of Settlement are not available if a corporation, association, partnership, or estate is the payee, nor if the guaranteed interest payments or instalments will, irrespective of dividends or indebtedness, be less than \$10 each.

If any of the above options has been elected, a supplementary contract bearing the date on which the proceeds of the Policy become payable and providing for the settlement elected will be issued.

Surrender or Transfer of Supplementary Contract.—Unless otherwise specified in the election, neither the supplementary contract nor any of the benefits accruing thereunder shall be transferable or subject to surrender, commutation, or encumbrance, except that at the death of the last surviving payee the then surrender value as defined below shall be payable to the executors or administrators of such payee.

The surrender value of the supplementary contract shall be as follows:

Option 1.—The principal sum with any accrued interest:

Options 2 and 3.—The commuted value, computed at three per cent interest compounded annually, of future instalments certain. Under Option 3 no such surrender may be made during the lifetime of the original payee;

Option 4.—Such part of the proceeds of the Policy and interest thereon as shall not have been paid in instalments.

Section 2. Annual Dividends.

The share of the divisible surplus accruing on this Policy shall be allotted as a dividend annually on each anniversary of its date, the first such dividend being payable only if any premium due on the first anniversary be duly paid.

Each such dividend may be either:—

1. Paid in cash; or,
2. Used toward payment of any premium if the remainder of the premium is duly paid; or,
3. Deposited with the Company at interest within ninety days from date of allotment (called dividend deposit). Interest will be credited at such rate as may be determined by the Company, but never less than three per cent a year, and will be added to existing dividend deposits annually. Dividend deposits existing at the death of the Insured shall be then payable to the beneficiary.

At any time any accumulated dividend deposits may be withdrawn; if not so drawn they shall be

payable at the termination of the Policy.

If none of the options shall be exercised, the dividend will be paid in cash.

Post Mortem Dividend.—Upon the death of the Insured a cash dividend will be credited to this Policy for the fraction of the policy year elapsed before such death.

Section 3. Change to other Forms of Policy.

Option of Change.—Provided this Policy is in full force and no premium is in default, this Policy may be exchanged, without evidence of insurability, on any anniversary of its date occurring during its continuance, including the termination date, or within thirty-one days after the termination date if the Policy was in force on the termination date and if exchanged during the lifetime of the Insured, for a policy on the Ordinary Life, Limited Payment Life, or Endowment Insurance plan, without Double Indemnity or Waiver of Premium, or other special benefit or feature.

General Provisions.—If a change is made under the above provision of this section, the date of the new policy will be the anniversary as of which such change is made. Such new policy will be for the same face amount as this Policy, will be written at the age of the Insured at nearest birthday on such anniversary, and will be at the rate of premium and with the provisions of the policy then in use by the Company.

Section 4. Premiums.

Renewal Premiums.—The premiums by the payment of which this Policy may be renewed yearly

on each anniversary of its date prior to the termination date specified on page 1, are those shown in the following Table:

TABLE OF RENEWAL PREMIUMS PER
\$1,000 FACE AMOUNT OF POLICY

Attained Age Nearest Birthday on Anniversary	Annual Premiums	Attained Age Nearest Birthday on Anniversary	Annual Premiums	Attained Age Nearest Birthday on Anniversary	Annual Premiums
21	\$11.35	36	\$13.92	51	\$22.80
22	11.46	37	14.20	52	24.05
23	11.58	38	14.52	53	25.42
24	11.70	39	14.85	54	26.96
25	11.82	40	15.22	55	28.63
26	11.96	41	15.61	56	30.48
27	12.10	42	16.04	57	32.52
28	12.25	43	16.50	58	34.76
29	12.42	44	17.03	59	37.23
30	12.59	45	17.59	60	39.95
31	12.77	46	18.24	61	42.94
32	12.97	47	18.94	62	46.23
33	13.19	48	19.74	63	49.82
34	13.41	49	20.65	64	53.77
35	13.65	50	21.67		

Semi-annual premium—52% of the annual. Quarterly premium—26½% of the annual. This Policy will terminate on the termination date specified on page 1 but see Section 3 "Change to other Forms of Policy".

The premiums for the face amount of this Policy stated in the Table are based on the net one year term premiums according to the American Experience Table of Mortality assuming interest at the rate of three per cent a year.

General Provisions.—All premiums are payable on or before their due date either at the Home Office of the Company or to any agent of the Company, but only on delivery of a receipt signed by the

Treasurer of the Company and countersigned by the person receiving the premium.

A grace of thirty-one days shall be granted for the payment of each premium after the first, during which days of grace the insurance shall continue in force.

If this Policy shall become payable by the death of the Insured, any unpaid premium or premiums necessary to complete premium payments for the policy year in which such death occurs (including the overdue premium, if death occurs within the days of grace) shall be deducted from the amount payable.

If any premium be not paid before the end of the days of grace, then this Policy shall immediately cease and become void, and all premiums previously paid shall be forfeited to the Company.

Section 5. Reinstatement.

This Policy may be reinstated at any time within five years after default in payment of premium but not later than its termination date, upon evidence, satisfactory to the Company, of the Insured's then insurability and the payment of all overdue premiums with compound interest at the rate of five per cent a year.

Page 3

Section 6. Miscellaneous Provisions.

Residence and Travel.—This Policy is free from restrictions as to residence and travel.

Occupation.—This Policy is free from restrictions as to occupation.

Suicide.—In the event of the self-destruction of the Insured, whether sane or insane, within one year

after the date of issue of this Policy, the amount payable shall be limited to an amount equal to the premiums paid hereon.

Incontestability.—Except for non-payment of premiums, this Policy shall be incontestable after one year from its date of issue unless the Insured dies in such year, in which event it shall be incontestable after two years from its date of issue.

Misstatement of Age.—If the age of the Insured shall have been misstated, the amount payable by the Company shall be such as the premium paid would have purchased at the correct age.

Change of Beneficiary.—Unless otherwise provided by endorsement on this Policy or unless there be an existing assignment of this Policy other than to the Company, the beneficiary may be changed from time to time, while the Policy is in force, by written notice to the Company at its Home Office accompanied by the Policy for endorsement. Such change shall take effect upon endorsement of the Policy by the Company.

The interest of any beneficiary who dies before the Insured shall vest in the Insured unless otherwise provided in this Policy.

Rights of the Insured.—Except as may otherwise be specifically provided in this Policy or by endorsement on this Policy, the Insured may during his lifetime, without the consent and to the exclusion of the beneficiary, receive, exercise, and enjoy every benefit, option, right, and privilege conferred by this Policy or allowed by the Company.

Policy Settlement.—All sums payable by the Company under this Policy shall be payable at the

Home Office of the Company in the City of New York.

In any settlement of this Policy at its maturity as a death claim surrender of the Policy to the Company will be required.

The Contract.—This Policy and the application, copy of which is attached, constitute the entire contract.

All statements made by the Insured shall, in the absence of fraud, be deemed representations and not warranties, and no statement shall avoid or be used in defence to a claim under this Policy unless contained in the written application and a copy of the application is attached to the Policy when issued.

Assignment.—The Company shall not be charged with notice of any assignment of any interest in this contract until the original assignment or a certified copy thereof has been filed with the Company at its Home Office.

The Company assumes no responsibility as to the validity or effect of any assignment.

Notice.—No agent or other person except the President, a Vice-President, or a Secretary of the Company has power on behalf of the Company to bind the Company by making any promises respecting benefits or accepting any representations or information not contained in the written application for this Policy, or to make or modify this contract, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the Company's rights or requirements.

Monthly and Annual Instalments for Each \$1,000 of Proceeds of Policy under Optional Modes of Settlement 2 and 3

The semi-annual and quarterly instalments are 50.37% and 25.24% respectively of the annual instalment

OPTION 2				OPTION 3												
Number of Years' Instalments	Each Monthly Instalment	Instalment Each Annual	Age of Payee When Proceeds Payable	5 Years Certain		10 Years Certain		20 Years Certain		Age of Payee When Proceeds Payable	5 Years Certain		10 Years Certain		20 Years Certain	
				Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment		Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment
9	\$12.86	\$507.39	10 and 11 under	\$3.81	\$44.85	\$3.75	\$44.21	\$3.58	\$42.30	48	\$5.36	\$62.61	\$5.17	\$60.51	\$4.60	\$44.00
9	28.99	343.23	12	3.83	45.07	3.77	44.41	3.59	43.36	49	5.45	63.63	5.24	61.40	4.65	34.71
4	22.06	261.19	13	3.85	45.30	3.79	44.62	3.61	42.54	50	5.54	64.70	5.32	62.33	4.69	53.24
5	17.91	212.00	14	3.87	45.54	3.81	44.84	3.62	41.71	51	5.64	65.83	5.41	63.30	4.74	55.71
6	15.14	179.22	15	3.89	45.78	3.83	45.07	3.64	40.90	52	5.74	67.02	5.49	64.30	4.76	58.20
7	13.16	155.83	16	3.91	46.03	3.85	45.29	3.65	40.08	53	5.85	68.26	5.58	65.35	4.83	60.94
8	11.68	138.31	17	3.94	46.27	3.87	45.53	3.67	39.27	54	5.97	69.57	5.68	66.44	4.87	63.72
0	10.53	124.69	18	3.96	46.52	3.89	45.76	3.69	38.47	55	6.09	70.95	5.78	67.57	4.92	66.50
10	9.61	113.82	19	3.98	46.77	3.91	45.99	3.70	37.66	56	6.22	72.40	5.88	68.75	4.96	69.81
11	8.86	104.93	20	4.00	47.02	3.93	46.23	3.72	36.87	57	6.35	73.93	5.98	69.98	5.00	72.16
12	8.24	97.54	21	4.02	47.28	3.95	46.48	3.74	36.10	58	6.49	75.53	6.09	71.24	5.05	74.56
13	7.71	91.29	22	4.05	47.55	3.97	46.74	3.76	35.34	59	6.64	77.22	6.21	72.55	5.09	76.99
14	7.26	85.95	23	4.07	47.84	4.00	47.01	3.78	34.59	60	6.80	78.99	6.32	73.91	5.13	79.44
15	6.87	81.33	24	4.10	48.11	4.02	47.29	3.80	33.85	61	6.96	80.85	6.44	75.31	5.17	81.91
16	6.53	77.29	25	4.12	48.45	4.05	47.59	3.82	33.12	62	7.13	82.81	6.57	76.73	5.20	84.40
17	6.23	73.74	26	4.15	48.77	4.07	47.90	3.84	32.40	63	7.31	84.87	6.70	78.23	5.24	86.90
18	5.96	70.59	27	4.18	49.12	4.10	48.22	3.86	31.69	64	7.51	87.03	6.83	79.75	5.28	89.41
19	5.73	67.78	28	4.21	49.47	4.13	48.56	3.89	31.00	65	7.71	89.31	6.96	81.30	5.30	91.93
20	5.51	65.26	29	4.25	49.85	4.16	48.91	3.91	30.33	66	7.92	91.69	7.09	82.80	5.33	94.46
21	5.32	62.98	30	4.28	50.24	4.19	49.28	3.94	29.68	67	8.14	94.19	7.23	84.50	5.36	97.00
22	5.15	60.92	31	4.32	50.65	4.23	49.66	3.96	29.05	68	8.37	96.81	7.37	86.14	5.36	99.56
23	4.99	59.04	32	4.35	51.08	4.26	50.07	3.99	28.44	69	8.61	99.56	7.51	87.79	5.40	102.14
24	4.84	57.33	33	4.39	51.53	4.30	50.49	4.02	27.85	70	8.86	102.43	7.65	89.46	5.42	104.74
25	4.71	55.76	34	4.43	52.01	4.33	50.93	4.05	27.28	71	9.13	105.44	7.79	91.15	5.42	107.36
26	4.59	54.31	35	4.48	52.50	4.37	51.39	4.08	26.73	72	9.40	108.57	7.93	92.79	5.42	110.00
27	4.47	52.94	36	4.52	53.02	4.42	51.87	4.11	26.20	73	9.69	111.84	8.07	94.44	5.42	112.66
28	4.37	51.71	37	4.57	53.56	4.46	52.38	4.14	25.69	74	9.99	115.25	8.21	96.06	5.42	115.34
29	4.27	50.60	38	4.62	54.13	4.51	52.90	4.17	25.20	75	10.30	118.78	8.34	97.65	5.42	118.04
30	4.18	49.63	39	4.67	54.73	4.55	53.45	4.21	24.73	76	10.62	122.44	8.47	99.21	5.42	120.76
			40	4.73	55.36	4.60	54.03	4.24	24.28	77	10.95	126.22	8.59	100.71	5.42	123.50
			41	4.78	56.02	4.65	54.63	4.28	23.84	78	11.29	130.13	8.71	102.14	5.42	126.26
			42	4.84	56.71	4.71	55.26	4.32	23.41	79	11.64	134.14	8.82	103.51	5.42	129.04
			43	4.91	57.43	4.77	55.91	4.35	23.00	80	12.00	138.25	8.92	104.80	5.42	131.84
			44	4.97	58.19	4.83	56.60	4.39	22.60	81	12.36	142.44	8.92	104.80	5.42	134.66
			45	5.01	58.99	4.89	57.31	4.43	22.20	82	12.73	146.70	8.92	104.80	5.42	137.50
			46	5.12	59.83	4.95	58.06	4.48	21.80	83	13.09	151.00	8.92	104.80	5.42	140.36
			47	5.19	60.71	5.02	58.84	4.52	21.40	84	13.46	155.34	8.92	104.80	5.42	143.24
			48	5.27	61.64	5.09	59.66	4.56	21.00	85	13.83	159.67	8.92	104.80	5.42	146.14

and over

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No. 4,591,472

THE MUTUAL LIFE INSURANCE
COMPANY OF NEW YORK

Annual Dividend

Convertible

Yearly Renewable Term

Policy

On the Life of

WALTER E. FREY

Amount, - - - - \$10000.

Date, March 8th 1932

Term Insurance until

March 8th 1947

Increasing Premiums.

291 S

Yearly Renewable Term

January, 1932.

[Endorsed]:

United States District Court. No. 19303. Frey
vs. Mut. Pltf. Exhibit No. 3.

Filed 5/18/33. Walter B. Maling, Clerk. By
S.T.M Deputy Clerk.

No. 7297. United States Circuit Court of Ap-
peals for the Ninth Circuit.

Filed Sep 26 1933 Paul P. O'Brien, Clerk.

PLAINTIFF'S EXHIBIT NO. 4

June 27, 1932.

FOR VALUE RECEIVED, I hereby assign and transfer to Herbert E. Frey all my claim and demand against the Mutual Life Insurance Company of New York arising out of and/or under a certain policy of insurance issued to me as beneficiary upon the life of Walter E. Frey in the sum of Five Thousand Dollars (\$5,000.00) and dated on or about the first day of June, 1932.

JOHN J. STEVENTON

June 27, 1932.

FOR VALUE RECEIVED, I hereby assign and transfer to Herbert E. Frey all my claim and demand against the Mutual Life Insurance Company of New York arising out of and/or under a certain policy of insurance issued to me as beneficiary upon the life of Walter E. Frey in the sum of Ten Thousand Dollars (\$10,000.00) and dated on or about the ninth day of March, 1932.

SELMA STEVENTON

[Endorsed]:

United States District Court. No. 19303. Frey vs. Mutual. Pltf. Exhibit No. 4.

Filed 5/18/33. Walter B. Maling, Clerk. By S.T.M., Deputy Clerk.

No. 7297. United States Circuit Court of Appeals for the Ninth Circuit.

Filed Sep. 26, 1933. Paul P. O'Brien, Clerk.

Have Old Spoken + Traveler made
one into (2) books to be taken on each
life - Radio to be cancelled
it will be in the month of the same.

Walter's policy to be taken under

by V. H. F. + S. F.
to replace S. F. policy

W. H. F. + S. F.

No. 19303

Free on Mutual - in the
Pitts. Fund No. 5

May 19, 1933

John J. Mahoney

UNITED STATES OFFICE OF INSURANCE
FOR THE STATE OF MASSACHUSETTS

FILED

SEP 26 1933

PAUL P. O'BRIEN,
CLERK



PLAINTIFF'S EXHIBIT NO. 6

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK

W. L. Hathaway,
Manager,
19th Floor, Hunter-Dulin Bldg.,
111 Sutter Street.

San Francisco, Cal., April 16, 1932

Mr. Herbert Frey

San Francisco, California

Dear friend Herbert:

I forgot to give you last night the assignments necessary to assign these policies absolutely, so that they will be payable to the San Francisco Milling Co. Ltd. When you have these proper signatures made out I will attend to the witnessing of same. As you know, you have a receipt from the company for the full first years premiums on these policies and I trust you will be able to secure for me the company's note for the total amount, so that we may then proceed to get some more insurance issued. I have already explained to you why this thing must be worked in this way.

With best regards,

Very truly yours,

L. A. STEINFELD,

City Manager

[Endorsed]:

United States District Court. No. 19303. Frey vs. Mutual Life Ins. Co. Pltf's Exhibit No. 6.

Filed May 19, 1933. Walter B. Maling, Clerk. By John J. Fahey, Deputy Clerk.

No. 7297. United States Circuit Court of Appeals for the Ninth Circuit.

Filed Sep. 26, 1933. Paul P. O'Brien, Clerk.

DEFENDANT'S EXHIBIT NO. A.

(Whenever the word "Insured" is used in this application it shall be construed as "the person whose life was or is to be insured by the under-mentioned policy.")

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK

Home Office, 32-34 Nassau Street,
New York City, N. Y.

APPLICATION FOR ESTABLISHING OR
REINSTATING POLICY

With Medical Examination

Each Question Must be Answered

Initial Premium—#414

Attached to Application Jun 3 - 1932. B/A. P.
W. Herold.

Initial not estab.

To be filled in at Agency.

A—Initial premium paid.....	19
B—Lapsed for premium due	19
Overdue premium to	19
and interest paid on	19
Overdue premium was extended to.....	19
Policy was surrendered	19

G. W. MURRAY

Agency Cashier.

To be filled in at Home Office.

Premium and interest paid to.....192.....

Policy surrendered for non-payment of loan due

.....

.....

For Auditor

Policy No. 4600 870-1 on the life of Walter E. Frey.

I (or we) hereby request The Mutual Life Insurance Company of New York to Establish or Re-instate, as the case may be, the above numbered policy, it being agreed that such Establishment or Re-instatement shall not take effect until this application shall have been finally approved at said Company's Home Office, and (a) the first premium or (b) the overdue premium or premiums and interest on loan, if any, with interest thereon to date of payment shall have been paid; that if this application be declined said Company will, upon surrender of any receipt or acknowledgment given therefor, return any payment made in connection with this application.

1. What is the occupation of the Insured? (Full details, business or trade and name of firm, and length of time so engaged.) Milling.

2. Has the Insured (I) since the date of the original application if a new policy is to be established, or (II) since the original due date of the first premium now in default, (or since the policy was surrendered or otherwise terminated, no premium being then in default) if a policy is to be reinstated:

(a) Made any aviation flights or aeronautical ascensions? (If so, give dates and full details.) (If none, so state) None.

(b) Made an application or submitted to an examination for life insurance upon which a policy has not been issued on the plan and premium rate originally applied for, or been refused restoration of insurance that had lapsed? (If so, give names of companies or associations.) (If not, state "No.")
No.

(c) Had any illness, disease, impairment of health, surgical operation, or physical examination or laboratory test, or been prescribed for, treated by or consulted a physician, surgeon or practitioner? (If so, give details of each and the name of each physician, surgeon or practitioner.) (If none, so state.)

Nature of illness, disease, etc., None.

Number of attacks

Date of each

Any remaining effects

Date of complete recovery

Name of Physician or Practitioner

Address of Physician or Practitioner

I (or we) agree on my own behalf and on behalf of every person who has or shall have any interest in said policy that the foregoing statements and answers, and the statements and answers made to the Company's Medical Examiner, are true and are offered to The Mutual Life Insurance Company of New York as an inducement to (a) establish or (b) reinstate (as the case may be) said policy, and further that the same are material to the risk which the Company is asked to assume by establishing or

reinstating said policy. If this is an application for establishing the above numbered policy I (or we) also affirm all the representations, statements, answers and agreements made in the application upon which said policy is to be issued, and those made to the Company's Medical Examiner in continuation of said application.

All communication should be sent to the following Post Office address (Street and Number or R. F. D.) 500 Berry St. (City or Town) San Francisco (County) (State or Province) Cal.

Dated at San Francisco this 1 day of June 1932.

WALTER E. FREY

Signature in full of the Insured, who must sign in the presence of a witness.

.....
Signature in full of person or persons other than the Insured who will pay the premiums who must sign in the presence of a witness.

I certify that the above statements were read, approved, and signed by the Insured, in my presence.

H. W. ALLEN, M. D.

Witness

I certify that the above statements were read, approved, and signed by the person who will pay the premiums, in my presence.

.....
Witness

Unless the policy was issued at the instance and request of some one other than the person insured and who will pay the premiums the signature of the Insured alone will be sufficient.

Note to Medical Examiner: If any impairment is found give full details including date—duration—and date of complete recovery.

The Company will pay the medical fee of \$3.00 when the restoration of a lapsed or surrendered policy is involved for the first time. Any subsequent restoration or examination to establish a new policy must be without expense to the Company.

This Policy may be delivered free from medical restrictions. Jun 1, 1932. H. W. Allen, Medical Referee.

[Endorsed]:

No. 7297. United States Circuit Court of Appeals for the Ninth Circuit. Filed Sep 26 1933. Paul P. O'Brien, Clerk.

United States District Court. No. 19303. Frey v. Mut. Defs. Exhibit No. A. Filed 5/18/33. Walter B. Maling, Clerk. By S. T. M.

DEFENDANT'S EXHIBIT NO. C

AVIATION FORM

Attached to Application Mar. 11, 1932. B. of A.—
W. Allan.

Supplement to my application for insurance to
The Mutual Life Insurance Company of New York
San Fran. Agency 414

Appl. or Pol. number 3/5/32 Date

1. Are you connected in any way with airway operations or airplane manufacture? If so, give full details as to duties and length of time so engaged. No.
2. Have you taken any flights during the past three

years? If so, list the record of these flights, as required below.

No.

IT IS UNDERSTOOD THAT EACH TAKE-OFF WITH LANDING CONSTITUTES A FLIGHT.

(Example: Taking off from one point and making two stops and take-offs before reaching objective point makes three flights.)

Year	How Many Flights Taken as Passenger	How many Flights Taken as Pilot	How Many Hours in the Air	No. of Miles Flown
1929	9	none	9	1000
1930	9	none	9	1000
1931	6	none	6	600

Current

Year to

Date None to date

3. What was the purpose of the flights? (State whether for business, pleasure or for instruction.) Business only.
4. (a) If your flying is done as a passenger only (not as a pilot), is it done on regularly scheduled lines Scheduled lines except taxi flights mentioned or on special taxi trips? 2 taxi trips 1929—2 taxi trips 1930 both included in above.
- (b) What type plane is used?.....
- (c) Is the pilot licensed? Yes.
5. (a) Are you a licensed pilot? No.
- (b) If so, what type aircraft do you fly? None.
6. If not a licensed pilot, have you had or do you contemplate instruction in piloting an airplane or other aircraft? No.

7. Do you own an airplane? If so, what make is it?
No.

What year was it built?.....

How long have you had it?.....

Do you pilot it yourself or have you a licensed
pilot to fly it?.....

8. (a) How much flying are you likely to do with-
in the next year? About same as in past.
May make occasional flights this coming
summer with friend who owns private plane.
- (b) What will be the purpose of these flights
(business, pleasure or for instruction?)
business.

HAVE YOU ANSWERED ALL OF THE
ABOVE QUESTIONS?

W. E. FREY,

Signature of Applicant

L. A. STEINFELD,

Witness.

Mar. 8, 1932

Date

[Endorsed]:

United States District Court. No. 19303. Frey
vs. Mut. Deft. Exhibit No. C.

Filed 5/18/33. Walter B. Maling, Clerk. By
S.T.M., Deputy Clerk.

No. 7297. United States Circuit Court of Ap-
peals for the Ninth Circuit.

Filed Sep. 26, 1933. Paul P. O'Brien, Clerk.

DEFENDANT'S EXHIBIT NO. D.

4591471 to 4591473
THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK
Bureau of Applications
34 Nassau Street
New York

This letter of advice does not modify nor change
any existing rules

March 8th, 1932

SUBJECT

Manager at San Francisco, Cal.

Referring to application #414—Walter E. Frey
delivery of policy (ies), herewith, is subject to
Inspector's report. Policies must not be delivered
until released from Home Office.

A. D. REILEY,

Supervisor of Risks.

NOTE:—All information regarding applications,
no matter by what department asked for, should
be sent direct to the Bureau of Applications.

[Endorsed]:

United States District Court. No. 19303. Frey
vs. Mutual. Deft. Exhibit No. D.

Filed 5/18/33. Walter B. Maling, Clerk. By
S.T.M., Deputy Clerk.

No. 7297. United States Circuit Court of Ap-
peals for the Ninth Circuit.

Filed Sep. 26, 1933. Paul P. O'Brien, Clerk.

DEFENDANT'S EXHIBIT NO. E

CALIFORNIA HAWAIIAN MILLING CO.

Incorporated

Hay, Grain and Alfalfa Products

330 Ritch Street

San Francisco, California

Telephone KEarny 5529

Cable Address "Ajax"

Standard Codes

Members

San Francisco Chamber of Commerce

San Francisco Grain Trade Association

Grain and Feed Dealers

National Association

April 4th, 1932

Mutual Life Insurance Co. of New York,

San Francisco,

California.

Gentlemen:

Regarding my recent application for insurance:

Supplementary to the aviation form which I recently furnished you in connection with my application in which I informed you that "I may make occasional flights this coming summer with friends who own a private plane." Since that time I have definitely made up my mind that I will not make any such flights, and will strictly confine any flights that I do make on regular commercial air lines, with licensed pilots between definitely established air ports.

I do not think it is fair that I should be held to this statement indefinitely and I therefore now agree not to do any flying in other than regular commercial planes, as above stated, for a period of two years from date. The chances are it will be of an indefinite nature, as the plane in which I had a vague idea that sometime I may possibly have gone up in, has since been destroyed by fire.

My reason for change in attitude at this time is that I have learned that the Insurance Companies do not look with favor upon risks who do other than commercial air line flying, and as I have made no definite plans to take these flights, and as it was merely a possibility that I might do so at some time, I would much rather put myself on record as stating that I will not make such flights for two years, for keeping my insurance in good standing is much more value to me than making an occasional flight outside of commercial air line flying.

Yours truly,

WEF/MK

W. E. FREY

[Endorsed]:

United States District Court. No. 19303. Frey v. Mut. Def. Exhibit No. E. 5/18/33. Walter B. Maling, Clerk. By S. T. M., Deputy Clerk.

No. 7297. United States Circuit Court of Appeals for the Ninth Circuit. Filed Sep 26 1933. Paul P. O'Brien, Clerk.

Recalled and Declined

DEFENDANT'S EXHIBIT NO. F.

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORKBureau of Applications
34 Nassau Street
New YorkThis letter of advice does not modify nor change
any existing rules

3-15-32

Manager at San Francisco, Cal.

Referring to application #414 W. E. Frey under which we wrote policy (ies) 4591471-2-3 we regret to advise you that we require the return of above policy (ies) to Accounting Department for cancellation, the risk having been declined, in view of information received.—24-8

A. D. REILEY,

Supervisor of Risks.

NOTE:—All information regarding applications, no matter by what department asked for, should be sent direct to the Bureau of Applications.

Received Mar 18 1932. W. L. Hathaway, Manager

[Endorsed]:

United States District Court. No. 19303. Frey vs. Mut. Deft. Exhibit No. F.

Filed 5/18/33. Walter B. Maling, Clerk. By STM, Deputy Clerk.

No. 7297. United States Circuit Court of Appeals for the Ninth Circuit.

Filed Sep. 26, 1933. Paul P. O'Brien, Clerk.

We regret we can make no change in decision declining insurance in favor of corporation. (8)

[Endorsed]:

United States District Court. No. 19303. Frey vs. Mut. Deft. Exhibit No. G.

Filed 5/18/33. Walter B. Maling, Clerk. By S.T.M. Deputy Clerk.

No. 7297. United States Circuit Court of Appeals for the Ninth Circuit.

Filed Sep. 26, 1933. Paul P. O'Brien, Clerk.

DEFENDANT'S EXHIBIT No. H

Appn. #414

#4600870-1

#414

Walter E. Frey

TO THE MUTUAL LIFE INSURANCE
COMPANY OF NEW YORK

Anything in this Policy to the contrary notwithstanding, it is understood and agreed that if the Insured shall, within one year after the date of issue of this Policy, make any flight in an aeroplane or any other kind of flying machine or make any balloon ascension, except as part of his duties while engaged in the military or naval service of the United States of America or the Dominion of Canada or except as a fare-paying passenger in a licensed passenger aircraft provided by an incorporated passenger carrier and operated by a licensed pilot on a regular passenger route between definitely established airports, this Policy shall be null and void but such part of any premium as

shall have been paid for the period from the date on which the Insured made such flight or ascension to the due date of the next.....annual premium shall be returned without interest.

Dated at San Francisco this 14th day of April, 1932.

L. A. STEINFELD,
Witness

W. E. FREY,
Insured

32-549

Beneficiary

Files Apr. 22, 1932. Filed by.....

Files May 6, 1932. Filed by E.R.C.

(To be filed with application Apr 16 Bureau of Applications.)

[Endorsed]:

United States District Court. No. 19303. Frey vs. Mut. Deft. Exhibit No. H.

Filed 5/18/33. Walter B. Maling, Clerk. By STM, Deputy Clerk.

No. 7297. United States Circuit Court of Appeals for the Ninth Circuit.

Filed Sep. 26, 1933. Paul P. O'Brien, Clerk.

DEFENDANT'S EXHIBIT NO. I

Read Instructions. Use care in filling in blank spaces. Read carefully before executing.

INSTRUCTIONS:—(1) SEE PROOF OF EXECUTION BY A CORPORATION BELOW:—

When executed by a Corporation, the Corporate Seal must be affixed to this instrument. This instrument should be executed by the President, Vice-

President, or Treasurer. A certified copy of the resolution of the Board of Directors giving him authority to execute this instrument must be furnished.

(2) In the acknowledgment, where marked with a red star (*) fill in "NOTARY" or whatever may be the official designation of the officer before whom the acknowledgment is taken.

(3) The officer before whom the acknowledgment or proof of execution is taken must affix his official seal. If he has no seal, a County Clerk's Certificate must be furnished, showing officer's authority to act.

Form 3602-7500-3-31

Absolute Assignment.

Edition Apr. 1927.

Both the original and duplicate instruments must be sent to the Company.

ORIGINAL ASSIGNMENT

The duplicate will be retained at the Home Office and the original will be returned with the Registrar's acknowledgment.

For One Dollar, to me/us in hand paid, and for other valuable considerations (the receipt of which is hereby acknowledged) I/we hereby assign, transfer and set over to (relationship to the insured, if any, should be stated) San Francisco Milling Company, Ltd., as their interest may appear, whose P. O. Address is San Francisco, Calif. all my/our right, title and interest in policy No. 4600,870 issued by

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK,

and for the consideration above expressed I/we do also for myself/ourselves my/our executors and administrators/successors, guarantee the validity and sufficiency of the foregoing assignment to the above named assignee , his/her/their executors, administrators/successors or assigns, and his/her/their title to the said policy will forever warrant and defend.

..... [Seal]
HERBERT E. FREY [Seal]

IN WITNESS WHEREOF, I/we have hereunto set my/our hand and seal , this..... day of19.....

Acknowledgment by an individual

State of.....
County of.....—ss.

On this.....day of....., in the year 19 , before me the undersigned, *a..... residing in....., duly commissioned and thereunto authorized, cameto me known and known to me to be the individual described in and who executed the foregoing assignment, and acknowledged that.....executed the same.

(Notary sign here)

*Notary see "Instructions" 2 and 3 at top of Original Assignment.

Proof of Execution by a Corporation
(See at Top Instruction 1)

State of.....

County of.....—ss.

On this.....day of....., in the year 19 , before me personally came.....to me known, who, being by me duly sworn, did depose and say that he resides in.....; that he is the.....of....., the corporation described in and which executed the foregoing assignment; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order.

(Notary sign here)

*Notary see "Instructions" 3 at top of Original Assignment.

ACKNOWLEDGMENT The duplicate of this original instrument has been noted and filed subject to all claims, liens and indebtedness, if any, existing in favor of the Company against above policy. The Company assumes no responsibility as to the validity or effect of the said instrument.

(Illegible)

Registrar.

Per.....

Form 3602-7500-3-31

File with Appn.

Absolute Assignment.

for

Edition Apr. 1927.

Registrar

To be filled in at Agency before sending to Home Office

From	Premiums
Agency	Paid to
	Agency
Date	Cashier

Use care in filling in blank spaces.
 Read carefully before executing.

DUPLICATE ASSIGNMENT.

For One Dollar, to me/us in hand paid, and for other valuable considerations (the receipt of which is hereby acknowledged) I/we hereby assign, transfer and set over to (relationship to the insured, if any, should be stated) San Francisco Milling Company, Ltd., as their interest may appear whose P. O. Address is San Francisco, Calif. all my/our right, title and interest in policy No. 4600,870 issued by THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK,

and for the consideration above expressed I/we do also for myself/ourselves my/our executors and administrators/successors, guarantee the validity and sufficiency of the foregoing assignment to the above named assignee , his/her/their executors, administrators/successors or assigns, and his/her/their title to the said policy will forever warrant and defend.

HERBERT E. FREY [Seal]
 [Seal]

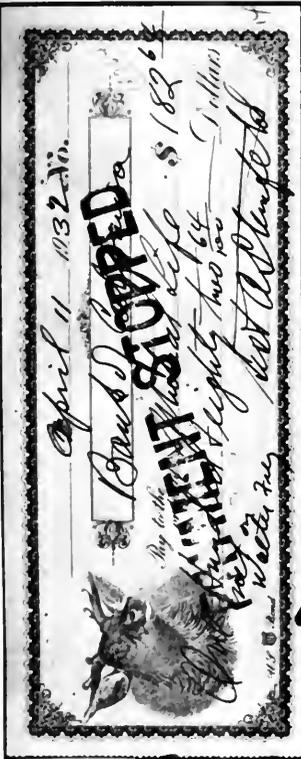
In witness whereof, I/we have hereunto set my/our hand and seal, this.....day of.....
 19.....

Acknowledgment by an individual.

State of.....
 County of.....—ss.

On this.....day of....., in the year 19 , before me the undersigned, *a.....



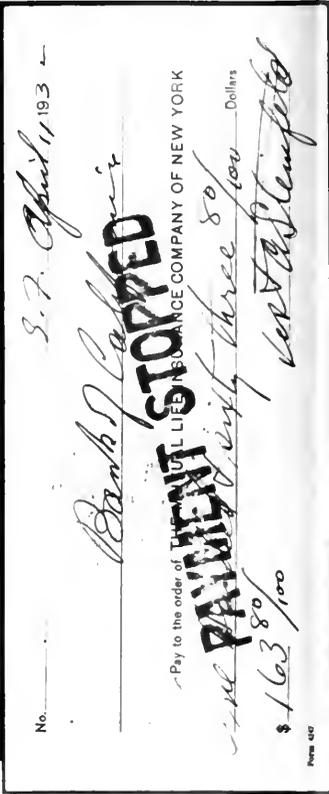


PAY TO THE ORDER OF
Crocker First National Bank
OF SAN FRANCISCO
THE LOYAL LIFE INSURANCE CO.
OF NEW YORK
G. W. JOURNAY, Agency Cashier

14 1932

RETURNED UNPAID
DEPOSITOR NOTIFIED BY TELEPHONE
WILL CALL AT CITY COLLECTION DEPARTMENT
FOR THIS ITEM.

RECLAMATION DEPARTMENT
Mutual (E.D.A.)





DEFENDANT'S EXHIBIT NO. L

Copy for Manager's Office.

Registrar's Subject Letter

NEW BUSINESS SUBJECT FORM

This advice does not modify nor change any existing rules.

To the Manager at San Francisco.

From G. TROWBRIDGE,

Assistant Secretary and Registrar

Date June 1, 1932

The enclosed policy (ies) No. 4600870—4615420-1 Insured's name Walter E. Frey must not be delivered or the first premium accepted thereon until and unless the request written below HAS BEEN EXECUTED BY THE INSURED.

This form, when properly executed as above, is to be returned to the REGISTRAR'S DIVISION at the Home Office.

G. TROWBRIDGE

Asst. Secretary and Registrar.

THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK

Home Office, 34 Nassau Street, New York, N. Y.

.....19.....

To the Mutual Life Insurance Company of New York:

Referring to the above numbered policy(ies) the undersigned hereby accepts the said policy(ies) issued as follows:

With the Right, without consent of any other person, to change the beneficiary and to Loan and Surrender Values and to Dividends and options provided in the policy, reserved to the Beneficiary.

Signature in full of the Insured.
(Always required.)

Signature in full of the person or persons who will pay the premiums. (To be executed only when the application is made at the instance and request of some one other than the Insured, and who will pay the premiums.) (If a corporation, an officer other than Insured, to sign for corporation, Show Title.)

[Endorsed]:

United States District Court. No. 19303. Frey vs. Mut. Deft. Exhibit No. L.

Filed 5/19/33. Walter B. Maling, Clerk. By STM, Deputy Clerk.

No. 7297. United States Circuit Court of Appeals for the Ninth Circuit.

Filed Sep. 26, 1933. Paul P. O'Brien, Clerk.

No. 7297

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK (a corporation),

Appellant,

VS.

HERBERT E. FREY,

Appellee.

BRIEF FOR APPELLANT.

F. ELDRED BOLAND,

KNIGHT, BOLAND & RIORDAN,

Balfour Building, San Francisco,

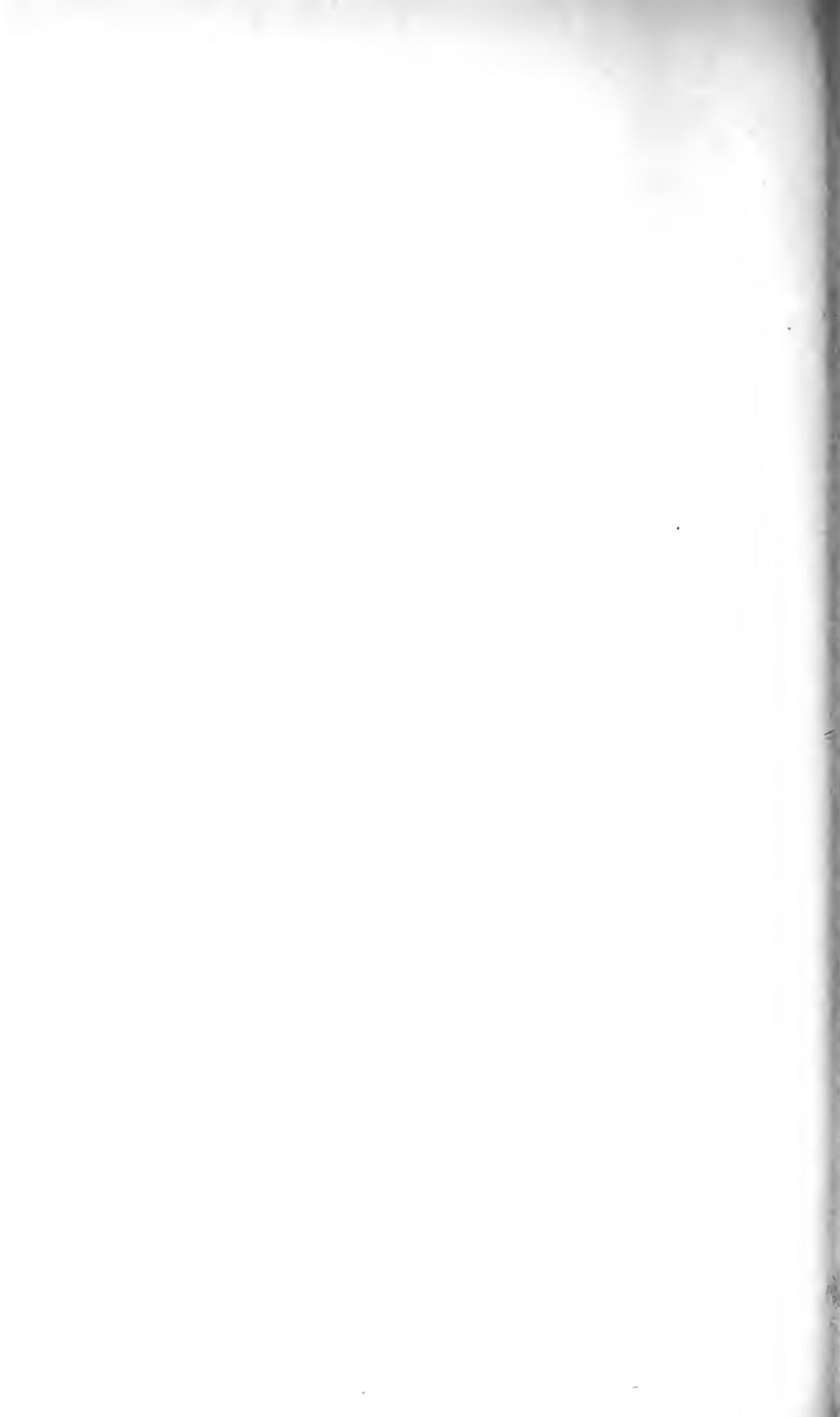
Attorneys for Appellant.

Filed

FEB 14 1934

PAUL P. OBRIEN,

CLERK



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No. 7297

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK (a corporation),
Appellant,

vs.

HERBERT E. FREY,

Appellee.

BRIEF FOR APPELLANT.

STATEMENT OF THE CASE.

By this action plaintiff, both as beneficiary and assignee of the beneficiaries, sought to recover upon five policies of life insurance totaling \$40,000.00. The case was tried to a jury and resulted in a verdict for defendant on three of the policies, totaling \$20,000.00, and a verdict for plaintiff on two of the policies, totaling \$20,000.00. It is from the latter verdict and judgment thereon that defendant appeals. No appeal was taken by plaintiff.

On March 4, 1933, Walter E. Frey made written application (Tr. pp. 63, 64) to defendant for three policies of insurance upon his life, as follows:

\$35,000.00 payable to San Francisco Milling
Company;

\$10,000.00 payable to Herbert E. Frey, his brother;
\$10,000.00 payable to Selma Steventon, his sister.

Defendant refused to issue the policy for \$35,000.00, payable to San Francisco Milling Company, but issued and sent to its San Francisco agency two policies for \$10,000.00 each, payable to Herbert E. Frey and Selma Steventon. Meanwhile, however, having learned that Walter E. Frey contemplated aviation in a private plane, these two policies were recalled; but upon receiving a declaration by Walter E. Frey that he would not fly in a private plane, the policies were again sent to the local agency. They carried the "airplane clause,"—prohibiting flights in private planes. The policies were accompanied by a "slip" (Exhibit "J", Tr. p. 76) which was required to be signed before the policies could be delivered. Upon their arrival they were delivered by the agency cashier, Mr. Murray, to the soliciting agent, Steinfeld, and the latter gave to Mr. Murray, as cashier, his personal checks for the net premium; that is to say, the premium less his commission. He then went to the office of the San Francisco Milling Company, and in the absence of Walter E. Frey, but in the presence of Selma Steventon and Herbert E. Frey, the beneficiaries, handed the policies to Selma Steventon with the words: "Here are the policies, they are paid for." (Steventon, Tr. p. 38.)

Defendant having rejected the policy for \$35,000.00, payable to San Francisco Milling Company, it was the

idea that the two policies should be assigned to the San Francisco Milling Company (it was apparently so-called "corporate insurance" which was wanted), and a form of assignment was actually executed by some of the parties, but never completed. Mr. Steinfeld testified that "Mrs. Steventon thereupon said, 'We don't want these policies. Walter might be feeling good some night and he will jump into a plane of a friend and fly on to Chicago and get killed.' They said further, 'It is impossible to comply with the requirements of these assignments. We could not in a thousand years get Walter's wife to sign these papers.' " (Tr. p. 66.)

Mr. Steinfeld then tried to collect the premium, but failed, *and no part of the premium was ever paid.* Two or three days later, failing to collect the premium Mr. Steinfeld stopped payment on the checks. These checks with the stop-payment notice are in evidence.

Mr. Steinfeld made further and continued efforts to collect the premium and finally, so he testified, called Mrs. Steventon on the telephone and asked her either to return the policies or pay the premium, as the company's auditor would be in and he must have either the premium or the policies. Thereupon Mrs. Steventon did return the policies to Mr. Steinfeld, who returned them to Mr. Murray, the cashier, who in turn returned them to the home office in New York, where they were cancelled.

It is important to note that no demand was ever made by Walter E. Frey or the beneficiaries for the return of these policies; they remain cancelled and

office copies only were produced at the trial. (Tr. p. 36.)

Some time later (after the surrender of the policies), so Mr. Steinfeld testifies (Steinfeld, Tr. p. 68), "Herbert rang me up and said, 'Now, I know what we want to do, we know just what we want to do now, and how much we want to take.' He told me how the policies should be made out and what they wanted to do. I said, 'Fine, Herb, your instructions will be carried out, but we must have Walter call at our office and furnish us with another examination.' He wanted \$5000.00 for Jack Steventon, a nephew, \$5000.00 for Herbert, and \$10,000.00 for San Francisco Milling Company." In consequence of this conversation Walter E. Frey did have a second physical examination and furnished a certificate of good health (Defendant's Exhibit A, Tr. p. 55.) This was dated June 1, 1932. Pursuant thereto three policies were again sent to the San Francisco agency, arriving on June 4, 1932. Steinfeld testified (Tr. p. 70), "I immediately got on the telephone and talked to Herbert. I told him that the policies had arrived. He said, 'I will meet you in an hour in the Merchants Exchange.' I said, 'Fine, where will I meet you—will I meet you in the grain pit?' He said, 'No, I will meet you up in room' so and so. I could not quite grasp that. Anyway I met him there in the office of Carl R. Schulz, an attorney. I met Steventon. He came along with me. When we got there I said, 'Here are your policies, boys.' We were talking there for about five or ten minutes and I said, 'Is Walter dead?' They said, 'Yes, he died last night.' "

As a matter of fact, Walter E. Frey had died in bed the preceding night, from, as testified by Doctor Berger, autopsy surgeon to the coroner, acute dilation of the heart, chronic myocarditis, and coronary sclerosis with occlusions. Based upon his autopsy, the examination made, his experience in thousands of autopsies and his medical training, Doctor Berger expressed the opinion that Walter E. Frey was not in good health on or subsequent to March 4, 1932.

Liability being denied upon any of the policies by defendant, this action was brought which, as stated, resulted in a verdict for defendant as to the latter three policies, and in favor of plaintiff as to the former two policies. Hence this appeal.

The application signed by Walter E. Frey on March 4, 1932, and the only application, contains the following stipulations:

“This application is made to The Mutual Life Insurance Company of New York herein called the Company. All the following statements and answers, and all those that the insured makes to the company’s medical examiner, in continuation of this application, are true, and are offered to the company as an inducement to issue the proposed policy. The insured expressly waives on behalf of himself or herself and of any person who shall have or claim any interest in any policy issued hereunder, all provisions of law forbidding any physician or other person who has attended or examined, or who may hereafter attend or examine the insured, from disclosing any knowledge or information which he thereby acquired. The proposed policy shall not take effect unless and

until delivered to and received by the insured, the beneficiary or by the person who herein agrees to pay the premiums, during the insured's continuance in good health and unless and until the first premium shall have been paid during the insured's continuance in good health."

And, further:

"It is agreed that no agent or other person except the President, Vice-President, a Second Vice-President, or a Secretary of the company has power on behalf of the company to bind the company by making any promise respecting benefits under any policy issued hereunder or accepting any representations or information not contained in this application, or to make, modify or discharge any contract of insurance, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the company's rights or requirements."

QUESTIONS IN ISSUE.

Out of the foregoing facts the following questions emerge:

1. The stipulation in the application that the premium must be paid in advance makes payment thereof a condition precedent to the taking effect of the policies; that is, the policy will not take effect until the first premium is paid. The application contains the further stipulation that no agent other than certain specified officers can waive this requirement. Since no premium is paid, and there was no waiver thereof, as required by the application, the policies

never took effect. This question is raised by the first, third and fifth assignments of error. (Tr. pp. 124, 126 and 130.)

2. There was no meeting of the minds of the parties sufficient to constitute a contract. There was no delivery or acceptance of the policies in fact. Acceptance and delivery are a question of intent, and the facts established no intent to deliver and accept the policies so as to make them effective. This question is raised by the first, second, third and fifth assignments of error (Tr. pp. 124, 125 and 130), and the objections to certain instructions covered by the seventh assignment of error. (Tr. p. 134.)

3. The stipulation in the application that the premium must be paid while the applicant is in good health makes not only payment but good health a condition precedent to the taking effect of the policy. We believe the evidence establishes that applicant, Walter E. Frey, was not in good health. This question is raised by the fourth and fifth assignments of error. (Tr. pp. 129 and 130.)

ERRORS RELIED UPON.

The following are the assignments of error which will be relied upon:

I.

The court erred in admitting evidence on behalf of the plaintiff as follows:

Plaintiff offered in evidence policy No. 4,615,421, policy No. 4,600,870 and policy No. 4,615,420.

Mr. Boland. I object to the offer and introduction in evidence upon the grounds, first, that it does not appear that the policies are in conformity with the application which is printed therein. Second: There is no showing that the premium thereon was paid. Third: It does not appear that any of the policies were delivered. Fourth: Upon the ground that the premium thereon was not paid while the insured was in good health, and that the burden of proof is upon the plaintiff to establish that delivery occurred while the applicant was in good health. Fifth: That the premium was not paid while the applicant was in good health.

The objection was overruled and exception allowed, and the policies introduced in evidence, and copies of each were annexed to and are a part of the complaint herein.

II.

The court erred in admitting evidence on behalf of the plaintiff as follows:

Plaintiff thereupon offered in evidence copies of policies numbers 4,591,472 and 4,591,473, following stipulation of counsel that they were copies of policies dated March 8, 1932, and were furnished by defendant to plaintiff pursuant to an order of this court, that the originals had been destroyed, that the copies of the applications annexed thereto were annexed in error and that the true applications were the same as annexed to the other policies exhibits 1 and 2; that the marks "cancelled" appearing upon the signatures were not upon the originals at the time the policies were in the hands of

plaintiff, and that the beneficiary as shown on the original of exhibit 3 was Thelma Frey.

The Court (referring to exhibits 3 and 4). We will consider them as copies of the originals.

Mr. Boland. As to these, I will make the same objection, if I may do it in that manner, without repeating the grounds of objection.

The Court. Yes, you may, of course.

Mr. Boland. And I add to the objection that these are copies and the original is not accounted for, and there can be no assumption of delivery by the mere fact of possession, and therefore there is no foundation laid for their introduction; also, upon the further ground, as it appears in the policies themselves, the application was for \$35,000.00, payable to the San Francisco Milling Company, which is not involved here, and the two \$10,000.00 policies, and not for five policies, and that, therefore, either these policies are not admissible or the plaintiff must be put to his election as to which \$20,000.00 he will rely upon.

The objection was overruled; exception allowed; policies introduced in evidence and marked "Plaintiff's Exhibit 3" and "Plaintiff's Exhibit 4."

III.

The court erred in denying the following motion: At the termination of plaintiff's case, defendant's attorney made the following motion:

Mr. Boland. I will now make a motion for dismissal of the case upon the ground that it has not been made to appear by any evidence that there was a delivery of any policy with intent to consummate a contract of insurance.

I am referring to all of the policies, instead of naming each one, if I may do it that way, your Honor. There is no evidence that there was any delivery of any of the policies with intent to consummate a contract of insurance. There is no evidence of the acceptance of any of the policies by Walter E. Frey, or by anyone on his behalf, with intent to consummate a contract of insurance. There is no evidence that any premium was paid upon any policy. That no policy was delivered to Walter E. Frey, or to anyone on his behalf, or accepted by him or anyone on his behalf. No policy was delivered to Walter E. Frey or to anyone on his behalf while he was in good health. No policy was accepted by Walter E. Frey or anyone on his behalf while he was in good health. No premium upon any policy was paid by said Walter E. Frey or anyone in his behalf while he was in good health. No policy was delivered to Walter E. Frey or to anyone on his behalf, or accepted by him or by anyone on his behalf, or the premium thereon paid, while Walter E. Frey was in good health.

After argument of the motion, plaintiff asked permission, which was granted, to reopen the case.

Herbert W. Allen,

being called as a witness for plaintiff, being first duly sworn, testified as follows:

I am a duly licensed physician, practicing in San Francisco over thirty years, and am a graduate of Johns Hopkins Medical School. I am in the employ of defendant, and have been for something over twenty years. I have a per-

sonal recollection of making a physical examination of Walter E. Frey about the 4th day of March, 1932. It was the usual insurance examination. The first thing we do is to obtain the applicant's medical history, family history, moral history, etc. Then we make a physical examination which includes the applicant's height, weight, measurements, heart and lungs, a review of his nervous system and an abdominal examination. I made such an examination on or about March 4, 1932. As far as my examination of Walter E. Frey went, I found no evidence of disease. I found him to be in a normal condition of health and so reported to the defendant. On or about June 1, 1932, I again examined Walter E. Frey in a less extensive manner. I examined his heart and I found nothing abnormal that I could detect, which I reported to defendant.

Thereupon defendant's motion for dismissal was renewed and denied, and an exception allowed as to each policy separately.

IV.

The court erred in overruling defendant's objection to questions as follows:

Q. If I told you, Doctor, that an autopsy surgeon found a heart acutely dilated in all chambers and filled with a dark fluid blood, the heart about one and one-half times its normal size, and there are scattered regions of fibrosis throughout; the coronary vessels of the left side indicate a marked thickening and in the descendens branch about one and one-half inches from its origin there is a complete occlusion by virtue of marked sclerosis of the vessel. There

is no acute infarction seen. The coronary vessels of the right side, although thickened to a moderate degree, are in no way comparable to those of the left side. There is some sclerosis at the aortic cusps. The cusps are not flexible. Do these findings necessarily indicate that the person examined was not in good health prior to the time of death?

Mr. Boland. I object to the question as not comprehensive of the testimony of Doctor Berger. Doctor Berger indicated in his testimony that he had examined the heart during his autopsy and had excluded all the accumulated blood and came to the conclusion that the heart was one and one-half times its normal size for a long period prior to death, and anterior to the time when the application here was signed. Therefore, the question directed to the witness is not comprehensive, and therefore is objectionable. It does not state the testimony as given by Doctor Berger.

The Court. Objection overruled; exception.

V.

The court erred in denying the motion made by defendant at the termination of the case, as follows:

The testimony being closed, defendant moved the court for a directed verdict in favor of the defendant as to each policy upon each of the following grounds, and the court assented that defendant should not be required to repeat the grounds as to each policy, as follows:

That the preponderance of the evidence does not establish that there was any delivery of any policy with intent to consummate a contract of

insurance. That the preponderance of the evidence does not establish, in fact, there is no evidence to establish, that there was any delivery of the policy to the insured, Walter E. Frey; in fact, the evidence discloses that he never, so far as the evidence shows, had his hands on the policy or ever knew that it had been left on the table, as testified, and he was the only party to this contract; Mrs. Steventon and Mr. Herbert Frey, etc., are not parties to the contract at all; the only contract was between Walter Frey and the defendant insurance company. There was no acceptance of any policy by Walter E. Frey, no premium was paid upon any policy by Walter E. Frey, or by anyone on his behalf, or otherwise. No policy was delivered to Frey, either by manual transmission or with intent to consummate a contract, which is the legal significance of delivery, while he was in good health. No policy was accepted by Walter E. Frey while he was in good health, and no premium on any policy was paid by Walter E. Frey, or by anyone on his behalf while he continued in good health. No policy was ever delivered to Walter E. Frey, or accepted by Walter E. Frey, or premium paid by Walter E. Frey while he was in good health.

The foregoing motion was denied and exception allowed.

VII.

The court erred in instructing the jury as follows, as to each instruction so given an exception was duly allowed:

(A) The court instructs you that a policy of insurance will, in the absence of evidence to

the contrary, be presumed to take effect upon its date.

(B) The court instructs you that delivery of a policy of insurance is effective by sending the policy to an agent of the company for the sole purpose of making delivery to the insured or the beneficiary.

(C) If it be intended that a policy of insurance should be in force before it is actually handed over, it will be deemed constructively delivered.

(D) If you find that certain policies were executed and mailed from the home office of the insurance company on June 1st and if you further find that it was the intention of the parties that they should go into effect on that date, then you should be warranted in finding that the policies were delivered on June 1st.

(E) The court instructs you that possession of a policy of insurance by the beneficiary is prima facie evidence of its delivery as a valid and existing contract. The plaintiff in this action by producing and putting in evidence the three policies dated the first day of June, 1932, established a prima facie case to recover upon said policies and the burden of overcoming said prima facie case thereupon shifted to the defendant insurance company.

(F) Was it the intention of the parties that the policies should be deemed delivered when they were executed and mailed in New York June 1st and was the deceased in good health at that time?

(G) After the jury retired the following occurred:

The Court. The following note was sent from the Jury to the Court:

“Hon. Judge Kerrigan

We the Jury in this case request additional instruction having to do with Exhibit ‘J’.

We desire, your Honor, to know if it was essential that these forms be signed by the applicant on delivery of the policies in order to complete the contract. This refers to the first two policies of \$10,000 each #4591472 #4591473.

Gentlemen: My answer is No.

Frank H. Kerrigan, U. S. District Judge.”

Mr. Boland. The defendant notes an exception to that.

ARGUMENT.

FIRST QUESTION.

PREPAYMENT OF THE PREMIUM IS A CONDITION PRECEDENT TO THE TAKING EFFECT OF THE POLICIES, WHICH COULD NOT BE WAIVED EXCEPT BY CERTAIN SPECIFIED OFFICERS.

The application provided, as will be recalled:

“The proposed policy shall not take effect unless and until delivered to and received by the insured, the beneficiary, or by the person who herein agrees to pay the premiums, during the insured’s continuance in good health, and unless and until the first premium shall have been paid during the insured’s continuance in good health.”

And also provided:

“It is agreed that no agent or other person except the President, Vice-President, a Second

Vice-President, or a Secretary of the company has power on behalf of the company to bind the company by making any promise respecting benefits under any policy issued hereunder or accepting any representation or information not contained in this application, or to make, modify or discharge any contract of insurance, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the company's rights or requirements."

It will also be recalled that no premium was ever paid by the insured, or by any one on his behalf. Also, Mr. Steinfeld, the agent, made continuous effort to collect the premium. Also, that the checks which he gave to Mr. Murray, the cashier, were never paid; that is, that he stopped payment within two or three days when he found that neither the insured nor beneficiaries would pay the premium. In other words, no premium was ever paid; nor was there ever any effective waiver of the premium.

It is now established in the jurisprudence of the Federal courts, that these conditions precedent, and the limitations upon the power of the waiver thereof, are valid and will be meticulously enforced. Argument by me upon this subject is superfluous. Abler men than I am have said it better than I can.

Bergholm v. Peoria L. Ins. Co., 284 U. S. 489,
76 L. ed. 416.

This was an action upon a life insurance policy which it was claimed by defendant insurance company had lapsed for non-payment of premiums. The beneficiary sued to recover upon the ground that

prior to lapse the insured had become totally disabled, and that such disability under the terms of the policy waived payment of premiums. The policy provided: "Upon receipt by the company of satisfactory proof that the insured is totally and permanently disabled, as hereinafter defined, the company will [waive payment of premium]." The question to be determined was whether the provision for furnishing proof of disability was a condition precedent, and after discussing the conflict between the different districts, the Supreme Court said:

"Here the obligation of the company does not rest upon the existence of the disability; but it is the receipt by the company of *proof* of the disability which is definitely made a condition precedent to an assumption by it of payment of the premiums *becoming due after the receipt of such proof*. * * *.

Contracts of insurance, like other contracts, must be construed according to the terms which the parties have used, to be taken and understood, in the absence of ambiguity, in their plain, ordinary and popular sense. *Imperial F. Ins. Co. v. Coos County*, 151 U. S. 452, 462, 463, 38 L. ed. 231, 235, 236, 14 S. Ct. 379. As long ago pointed out by this court, the condition in a policy of life insurance that the policy shall cease if the stipulated premium shall not be paid on or before the day fixed is of the very essence and substance of the contract, against which even a court of equity cannot grant relief. *Klein v. New York L. Ins. Co.*, 104 U. S. 88, 91, 26 L. ed. 662, 663; *New York L. Ins. Co. v. Statham*, 93 U. S. 24, 30, 31, 23 L. ed. 789, 791, 19 Am. Rep.

512; *Pilot L. Ins. Co. v. Owen* (C. C. A. 4th), 31 F. (2d) 862, 866. And to discharge the insured from the legal consequences of a failure to comply with an explicitly stipulated requirement of the policy, constituting a condition precedent to the granting of such relief by the insurer, would be to vary the plain terms of a contract in utter disregard of long settled principles.”

MacKelvie v. Mutual Ben. L. Ins. Co., 287 Fed. 660.

Action upon an insurance policy. Premium had not been paid, and the application, as will appear from the decision, required prepayment. The court said:

“The question which these facts present is one of general jurisprudence, and the decision of no state court can be regarded as controlling. *Aetna Life Insurance Co. v. Moore*, 231 U. S. 543, 34 Sup. Ct. 186, 58 L. ed. 356. In that case the place of contract was admittedly Georgia, and it was argued that a decision of the Georgia court was controlling. The Supreme Court held it was not controlling.

The law is settled in this court that, when a life insurance policy contains, as this one did, the provision that it ‘will not take effect, unless the first premium or agreed installment thereof shall be actually paid during the lifetime of the insured’, the provision means exactly what it says and will be enforced. And if the policy contains, as this one did, the express provision that ‘agents are not authorized to make, alter or discharge contracts’, the waiver relied on must be one by the company itself, and no attempted waiver by an agent will be treated as its equiva-

lent. In *Pennsylvania Casualty Co. v. Bacon*, 133 Fed. 907, 67 C. C. A. 497, a policy of insurance stated that it was not to take effect 'unless the premium is actually paid previous to any accidents upon which claim is made', and it provided that no waiver should be binding on the insurer unless indorsed on the policy and signed by the president or secretary of the company. This court held that a subagent had no authority to accept a note in lieu of cash for the first premium, and to thereby waive the provisions of the policy. The decisions of the Supreme Court in *Northern Assurance Co. v. Grand View Building Association*, 183 U. S. 308, 22 Sup. Ct. 133, 46 L. ed. 213; *Penman v. St. Paul Fire & Marine Ins. Co.*, 216 U. S. 311, 30 Sup. Ct. 312, 54 L. ed. 493; *Aetna Life Insurance Co. v. Moore*, 231 U. S. 543, 34 Sup. Ct. 186, 58 L. ed. 356; *Lumber Underwriters v. Rife*, 237 U. S. 605, 35 Sup. Ct. 717, 59 L. ed. 1140; *Mutual Life Ins. Co. v. Hilton-Green*, 241 U. S. 613, 36 Sup. Ct. 676, 60 L. ed. 1202—support the same doctrine. The provisions that a policy of life insurance shall not take effect unless the first premium is actually paid in cash during the lifetime of the person insured is valid and will be enforced according to its terms."

Aetna Life Ins. Co. v. Johnson, 13 Fed. (2)
824.

Action upon insurance policy. The premium was not paid. The application stated:

"I also acknowledge that all policies and agreements made by said Aetna Life Insurance Company are signed by one or more of the execu-

tive officers; and that no agent or other person not an executive officer can grant insurance, or waive any condition of its policies, or make any agreement which shall be binding upon said company'. The policy provides that the application was made a part of the policy contract, and that the policy and application should constitute the entire contract between the parties. It recited that the agreement to insure was made in consideration of the annual premium of \$238.26, to be paid to the company at its home office, or to its agent, at or before 5 o'clock p. m. of the 26th day of January in each and every year. It also contained this provision: 'This policy shall not take effect until the first premium thereon shall have been actually paid, during the good health of the insured, a receipt for which payments shall be the delivery of the policy'."

The court said:

"It is a rule generally adopted in the United States courts that, if a policy of life insurance provides that it is not to take effect until the first premium is paid, recovery cannot be had upon the policy, when it appears that the premium was unpaid at the date of the death of the insured, unless it appears that payment was waived by action of the insuring company.

A waiver of this requirement cannot be made by an agent of the insurance company, *when the policy provides that no person except other designated officers of the insurance company may alter or waive any provision of the policy*, unless the insuring company has authorized the waiver to be made. *Mutual Reserve Fund Life Ass'n. v. Simmons*, 107 F. 418, 422, 424, 46 C. C. A.

393; *Pennsylvania Casualty Co. v. Bacon*, 133 F. 907, 909, 67 C. C. A. 497; *MacKelvie v. Mutual Ben. Life Ins. Co. (C. C. A.)*, 287 F. 660, 663.”
Person v. Aetna Life Ins. Co., 32 F. (2d) 459.

Action to cancel and rescind life insurance policy upon the ground that the first premium was not paid while applicant was in good health. Defendant moved to dismiss. This motion was denied and this judgment was affirmed. The complaint alleged among other things:

“That said application, among other things, provided: ‘It is agreed that no insurance hereon shall be effective until a policy is issued and the entire first premium has been paid during the good health of the proposed insured, and within sixty days from the date hereof. * * *’

The motion to dismiss was denied; defendants elected to stand upon their motion and refused to plead further; plaintiff deposited the amount of the premium in court, and a decree was entered canceling the policy. The present appeal followed.

The main question involved in the case is what construction should be placed upon the above quoted clause in the policy. Is good health on the part of the insured at the time the first premium is paid a condition precedent to the taking effect of a valid contract of insurance, or does the contract of insurance take effect at the time of the payment of the first premium, unless at that time the insured knew or had reason to suspect that he was not in good health? The former construction was adopted by the court below; the latter is contended for by appellants.

By the great weight of authority, both in the federal and state courts, the former of these two constructions is placed upon such a clause."

The court discusses several of the federal cases and then says:

"Cooley's Briefs on Insurance (2d Ed.), vol. 1, p. 693, states the rule as follows: 'Where an application for a life insurance policy, or the policy itself, or both the application and the policy, contain a provision to the effect that the policy shall not become operative until the first premium thereon has been actually paid to the company or to an authorized agent during the good health of the applicant, actual payment of the first premium while insured is in good health is a condition precedent to the liability of the insurer, unless waived.' Many state court decisions are cited in support of the rule."

Inter-Southern Life Ins. Co. v. McElroy, 38 Fed. (2) 557.

Action upon insurance policy. It was admitted the premium had not been paid, and the court found that the policy had been delivered. "The application which was, by proper reference, made a part of the policy, contained a provision: 'That, except as otherwise stated in the form of binding receipt hereto attached bearing the same number as this statement, no contract of insurance shall be deemed made, and the company shall incur no liability until a policy shall be issued and delivered to me personally and the first premium thereon actually paid during my lifetime and while I am in good health.' " The court said:

“The insured, in fact, paid nothing on the premium, nor did the soliciting agent pay anything under his agreement with the insured heretofore set out, until after the death of the insured. The provision in the application and policy, to the effect that the policy should not become effective until the first premium should be paid during the good health of the insured, was valid and binding as a condition precedent. *Person v. Aetna Life Ins. Co.* (C. C. A.) 32 F. (2d) 459, 466; *Aetna Life Ins. Co. v. Johnson* (C. C. A.) 13 F. (2d) 824; *Mutual Reserve Fund Life Ass’n v. Farmer*, 65 Ark. 581, 47 S. W. 850.”

The court further said:

“And the policy itself contains the following provision: ‘Only the President, a Vice President or the Secretary has power in behalf of the Company to make or modify this or any contract of insurance or to extend the time for paying any premium, and the Company shall not be bound by any promise or representation heretofore or hereafter given by any other person. No agent is authorized to waive forfeitures, or to make, modify or discharge contracts, or to waive or make conditional the payment of any premium or part thereof.’ A waiver of this requirement cannot be made by a soliciting agent of the insurance company when the policy provides that no person except other designated officers of the company may alter or waive any provisions in the policy, unless the insuring company has authorized the waiver to be made. *Aetna Life Ins. Co. v. Johnson* (C. C. A.), 13 F. (2d) 824, 825; *Equitable Life Assur. Society v. McElroy* (C.

C. A.), 83 F. 631; McKelvie v. Mutual Benefit Life Ins. Co. (C. C. A.), 287 F. 660; Aetna Life Ins. Co. v. Moore, 231 U. S. 543, 34 S. Ct. 186, 58 L. ed. 356; Prudential Life Ins. Co. v. Moore, 231 U. S. 560, 34 S. Ct. 191, 58 L. ed. 367; Northern Assurance Co. v. Grand View Bldg. Ass'n, 183 U. S. 308, 22 S. Ct. 133, 46 L. ed. 213; Bradley v. N. Y. Life Ins. Co. (C. C. A.), 275 F. 657; Jenkins v. International Life Ins. Co., 149 Ark. 257, 232 S. W. 3."

The court held it was error not to have granted a directed verdict.

Curtis v. Prudential Ins. Co., 55 Fed. (2) 97.

Action upon insurance policy. The court stated:

"The application was signed by the insured, and contained the following clause: 'I further agree that the policy herein applied for shall be accepted subject to the privileges and provisions therein contained and that unless the full first premium is paid by me at the time of making this application, the policy shall not take effect until issued by the company and received by me and the full first premium thereon is paid, while my health, habits and occupation are same as described in this application.'"

Some portion of the premiums were paid, but not in full. The court said:

"The validity of the provisions in the application and the policy is unquestioned. Similar provisions have been passed upon by the courts, and, so far as we can find, have been uniformly approved. * * *"

* * * "The provisions that a policy of life insurance shall not take effect unless the first premium

is actually paid in cash during the lifetime of the person insured is valid and will be enforced according to its terms.' See, also, *Sturgill v. New York Life Ins. Co.*, 195 N. C. 34, 36, 141 S. E. 280.

We believe this to be a wholesome rule, because it is clearly apparent that the business of life insurance, which is so important a part of our civilization in this latter-day world, could not be carried on were the insurance companies bound by every act or statement of a local agent; especially one whose duty is mainly that of soliciting or collecting. If it were otherwise, great injustice would follow, and a great loss be imposed upon holders of life insurance policies, because of the increased burden upon the companies that would result. While the courts are careful, in every way, to protect the interest of beneficiaries under insurance policies, yet there is a limit which should not be exceeded. The reasonableness of the respective contentions should be the yardstick with which to measure the justice of the matter. * * *

While we recognize the force of the contention made on behalf of the plaintiff that forfeitures are not favored at law, yet where there has been no contract there can be no forfeiture of a contract, and we think this is a case of no contract. None of the conditions precedent especially stipulated as necessary before the contract became binding was ever properly waived by any one having authority. *Slocum v. New York Life Ins. Co.*, 228 U. S. 364, 33 S. Ct. 523, 57 L. ed. 879; *New York Life Ins. Co. v. Fletcher*, 117 U. S. 519, 6 S. Ct. 837, 29 L. ed. 934; *Hoffman v. John Hancock Mutual Life Ins. Co.*, 92

U. S. 161, 23 L. ed. 539; Philadelphia Life Ins. Co. v. Hayworth (C. C. A.), 296 F. 339; Aetna Life Ins. Co. v. Johnson (C. C. A.), 13 Fed. (2d) 824; Dodd v. Eetna Life Ins. Co. (C. C. A.), 35 F. (2d) 673; Bradley v. New York Life Ins. Co. (C. C. A.), 275 F. 657.

This seems to be the rule supported by the great weight of authorities in the federal courts, and the questions here involved, being questions of general jurisprudence, are to be determined by the federal rule. Aetna Life Ins. Co. v. Moore, 231 U. S. 543, 34 S. Ct. 186, 58 L. ed. 356; MacKelvie v. Mutual Ben. Life Ins. Co. (C. C. A.) 287 F. 660, 663; Pilot L. Ins. Co. v. Owen (C. C. A.), 31 F. (2d) 862.”

New York Life Ins. Co. v. McCreary, 60 Fed. (2d) 355.

Action upon life insurance policy. The application stated as follows:

“ ‘It is mutually agreed as follows: 1. That the insurance hereby applied for shall not take effect unless and until the policy is delivered to and received by the applicant and the first premium thereon paid in full during his lifetime, and then only if the applicant has not consulted or been treated by any physician since his medical examination.’ ”

No immediate payment was made which would put the policy immediately in force. The court, after discussing the terms of the policy, states:

“It follows that no contract of insurance ever became effective unless, as claimed by the plaintiff, these conditions of the contract were waived.

It is contended that these conditions were waived because of the acts and knowledge of the defendant's soliciting agent. It is, however, to be observed that the application signed by the applicant contains specific provision that only the president, a vice president, a second vice president, a secretary, or the treasurer of the company could waive any of the company's rights or requirements. The principles of the general law of agency are applicable to insurance companies and their agents (*Globe Mutual Life Ins. Co. v. Wolff*, 95 U. S. 326, 24 L. ed. 387), and insurance companies, unless inhibited by valid statutory provisions, may limit the authority of their agents by agreements contained in the application for insurance, and such agreements are binding upon the applicant. *Aetna Life Ins. Co. v. Moore*, 231 U. S. 543, 34 S. Ct. 186, 58 L. ed. 356; *Northern Assurance Co. v. Grand View Bldg. Ass'n*, 183 U. S. 308, 22 S. Ct. 133, 46 L. ed. 213; *Jensen v. New York Life Ins. Co.* (C. C. A.), 59 F. (2d) 957; *Inter-Southern Life Ins. Co. v. McElroy* (C. C. A.), 38 F. (2d) 557; *Curtis v. Prudential Life Ins. Co.* (C. C. A.), 55 F. (2d) 97. * * *

The applicant, of course, is charged with notice of the agent's want of authority, and hence no resort can be had to the doctrine of apparent, ostensible, or implied authority. *New York Life Ins. Co. v. Fletcher*, 117 U. S. 519, 6 S. Ct. 837, 843, 29 L. ed. 934; *Jensen v. New York Life Ins. Co.* (C. C. A.) 59 F. (2d) 957; *Slocum v. New York Life Ins. Co.*, 228 U. S. 364, 33 S. Ct. 523, 527, 57 L. ed. 879, Ann. Cas. 1914D, 1029. In *New York Life Ins. Co. v. Fletcher*, supra, in speaking of the power of a soliciting

agent, it is said: 'Here the power of the agent was limited, and notice of such limitation given by being embodied in the application, which the assured was required to make and sign, and which, as we have stated, he must be presumed to have read. He is therefore bound by its statements.' "

It was then contended that the statutes of Nebraska made the soliciting agent the agent of the insurer. After quoting the statutes, the court says:

"These statutes do not sustain plaintiff's contention. They, to be sure, make the soliciting agent the agent of the insurer, but they leave the extent and nature of his authority as such agent of the insurer to be determined by the general law of agency. *Sun Insurance Office v. Scott*, 284 U. S. 177, 52 S. Ct. 72, 74, 76 L. ed. 229; *Jensen v. New York Life Ins. Co. (C. C. A.)* 59 F. (2d) 957; *Aetna Life Ins. Co. v. Roewe (C. C. A.)* 38 F. (2d) 393; *Maryland Casualty Co. v. Campbell (C. C. A.)* 255 F. 437; *Fidelity-Phenix Fire Ins. Co. v. Handley (C. C. A.)* 296 F. 902; *Newsom v. New York Life Ins. Co. (C. C. A. 6)* 60 F. (2d) 241."

CONTENTION OF PLAINTIFF.

It will be contended, I have no doubt, by plaintiff that the admission of payment of the premium in the policies is conclusive of that fact, under the law of California. In the proper case this may be so, but this is not such a case. Section 2598, Civil Code of California, provides as follows:

“An acknowledgment in a policy of the receipt of premium is conclusive evidence of its payment, so far as to make the policy binding, notwithstanding any stipulation therein that it shall not be binding until the premium is actually paid.”

It has never been held in California, in fact, in principle the contrary has been held, that such an admission in the policy prevails over an unperformed condition precedent. This honorable court had that question before it in a recent case.

New York Life Ins. Co. v. Gist, 63 F. (2d) 732.

This was an action to cancel and rescind the policy. This honorable court said:

“The ground upon which the insurance company seeks to cancel the policy is that between the date of the application for the insurance and the delivery of the policy the insured consulted a physician, and that, when the policies were delivered to the insured, the company was ignorant of that fact.”

The application provided as follows:

“‘It is mutually agreed as follows: 1. That the insurance hereby applied for shall not take effect unless and until the policy is delivered to and received by the applicant and the first premium thereon paid in full during his lifetime, and then only if the applicant has not consulted or been treated by any physician since his medical examination.’”

This honorable court determined upon the findings of the lower court that the applicant was not in good health.

“The appellees contend that, inasmuch as the policy here in question contained the recital that the premium had been paid on the 16th of November, 1925, the company thereby waived the condition precedent with reference to the consultation with or treatment by physicians subsequent to that date, and that the issuance of the policy with this recital by the officers of the company at its head office in New York, and the mailing of the policy to the agent at Tulare, Cal., for delivery by that agent to the insured, was a constructive delivery at the time of such subscription and mailing on November 30, 1925, and made the policy effective from the date thereon; namely, November 16, 1925. This argument is predicated in large part on the law of California (section 2598 Cal. Civ. Code), which expressly provides that: ‘An acknowledgment in a policy of the receipt of premium is conclusive evidence of its payment so far as to make the policy binding, notwithstanding any stipulation therein that it shall not be binding until the premium is actually paid.’ ”

In respect of this contention, this honorable court said:

“The preparation of the policy with a view to its delivery in a form which acknowledged receipt of a premium which had not yet been received was a mere preparation for the contract which was to be consummated at the time of the delivery of the policy to the insured and his acceptance thereof. While it is true that section 2598 of the Civil Code of California entered into and became a part of the contract of insurance [*Aetna Life Ins. Co. v. Geher* (C. C. A. 9), 50 F. (2d) 657], that section

merely provides that, by a recital in the policy that the premium has been paid, the insurance company is estopped to deny the payment so as to make the policy ineffective for nonpayment of premium. Evidently the statute is directed to the situation where the premium is taken care of by a note or some other credit arrangement, so that the premium has not been paid in the literal sense, since the company has not received the money therefor. This statute prevents the insurance company from taking advantage of the provision in the policy that it shall not become effective until the premium is actually paid, as has sometimes been attempted in such cases. *Palmer v. Continental ns. Co.*, 132 Cal. 68, 71, 64 P. 97; *Vierra v. N. Y. Life Ins. Co.*, 119 Cal. App. 352, 6 P. (2d) 349, supra; *Masson v. New England M. L. Ins. Co.*, 85 Cal. App. 633, 260 P. 367."

This honorable court then concluded:

"As we have pointed out above, the trial court was in error in holding that the policy of insurance became effective as of November 16, 1925, and, consequently, its conclusion that the consultations and treatments by the physician were immaterial is also erroneous. On the contrary, said consultations and treatments prevented the policy of insurance from becoming effective at all under the express terms of the application. *Subar v. N. Y. Life Ins. Co.*, supra; *Hurt v. N. Y. Life Ins. Co.* (C. C. A. 10), 51 F. (2d) 936; *N. Y. Life Ins. Co. v. Watkins*, 229 App. Div. 211, 241 N. Y. S. 441; *Jones v. N. Y. Life Ins. Co.*, 69 Utah 172, 253 P. 200.

Decree reversed, and the trial court directed to enter a decree canceling the policy and ordering the return of the premium paid."

It will be observed that in the foregoing case this honorable court gave effect to the condition precedent in the application. There is no case to the contrary in California. On the contrary, the Supreme Court of California has consistently recognized the legality and effectiveness of these conditions precedent and the right to limit the power and authority of the agent, just as have the Federal courts, although, perhaps, not upon the precise question here presented; but there can be no difference in principle.

Iverson v. Metropolitan Life Ins. Co., 151 Cal. 746.

Action upon policies of life insurance. In an application insured represented himself to be in good health, etc. It transpired that he was not, and that this fact was known to the soliciting agent. It was contended that the knowledge of the agent was the knowledge of the principal. The policy contained the usual clause limiting the agent's authority. In holding for the defendant, the court said:

“And that Clark, as soliciting agent, had neither actual nor ostensible authority to act so as to waive the truthfulness of any statement in the application for the policy, or to relieve the applicant from any warranties therein, or to bind the company by any knowledge he might possess in relation to such statements or warranties is clearly shown by the terms of the application itself, which expressly limits the power and authority of soliciting agents in those and in all particulars relative to matters pertaining to such application.

An insurance company can, like any other principal, prescribe limitations upon the power

and authority of agents, and persons dealing with such agents with knowledge of the limitations upon their authority are bound by the restrictions imposed. * * *.

As, by the terms of the application and the knowledge of the insured, the soliciting agent had no authority to bind the company in any way, either by express agreement or the possession of any knowledge or information concerning the falsity of any of the statements or warranties contained in the application, mere possession of knowledge of such falsity was not knowledge acquired within the scope of his authority, and therefore cannot be said to be the knowledge of the company. * * *.

The position taken here by appellant simply is that because the agent had information that a statement the assured warranted to be true was false, the mere possession of this knowledge bound the company and relieved the assured from his warranty, notwithstanding it was expressly provided in the application, and the insured knew, that the company could not be so bound, and could only be bound by having such information imparted in writing to the home officers who were authorized to act upon it. This position could only be sustained by holding that it was not competent for the company to limit the authority of its agents, and that the insured is not bound by the knowledge of such limitations. Of course, it cannot be so held. In the case at bar there is no question of fraud, deception, or misrepresentation practiced by the agent. The sole question is one of contract. The application contained a limitation on the authority of the agent expressly providing against the company being bound by any

information possessed by him not disclosed in the application, and declaring the only way it could be bound,—namely, by written statements furnished the officers at the home office for their action upon them. The assured knew all this and agreed to it. It was the contract of the parties upon the subject of the agent's authority, and prescribed the only method in which the company could be bound, which it is not pretended was followed, and we know no reason why the assured should not be controlled by the terms of the contract and the limitations on the authority of the agent imposed thereby.”

Sharman v. Continental Ins. Co., 167 Cal. 117.

Action upon a fire insurance policy. Policy required the insured to be the sole and unconditional owner of the property. It transpired that he was not, and that the agent of the insurer knew this fact. The court said:

“The policy which was delivered by the defendant and accepted by the plaintiff constituted the contract between them. It was accepted subject to the condition that it was void if the stipulation therein contained that plaintiff was the sole and unconditional owner of the property was untrue. It further provided that ‘no officer, agent or other representative of this company shall have power to waive any provision or condition in this policy except such as by the terms of this policy may be the subject of agreement indorsed hereon or added hereto’, and as to such provisions or conditions such officer, agent, or representative shall not be deemed to have waived them unless such waiver be written upon or attached to the policy.

An insurance company, like any other principal acting through agents, may limit their powers, and this was done by defendant by clear and plain terms in the policy here in question. When plaintiff accepted it it became the contract between him and the company and he was charged with knowledge of its terms, among others the limitations upon the power of the agent of the company. (*Westerfeld v. New York Life Ins. Co.*, 129 Cal. 68 [58 Pac. 92, 61 Pac. 667]; *Cayford v. Metropolitan Life Ins. Co.*, 5 Cal. App. 715 [91 Pac. 266]; *Blunt v. Fidelity & Casualty Co.*, 145 Cal. 268 [104 Am. St. Rep. 34, 67 L. R. A. 793, 78 Pac. 729].) * * *

The contention solely is that because Wade was agent of the company—the ostensible agent at least—his knowledge bound the defendant. But Wade was merely a soliciting agent of the defendant. He had no authority, actual or ostensible, to waive conditions in the policy. This was not within the scope of any apparent authority he possessed, and his knowledge of the true condition of the title of plaintiff, not communicated to the general agent of the company, was not the knowledge of the latter. The extent of his duties was merely to solicit insurance and send in applications therefor to the general agent of the defendant. He had no authority to consummate the contract of insurance and issue the policy, and it is only an agent of this character who could waive conditions notwithstanding the apparent limitations of the power of all agents to waive the conditions or stipulations of a policy. A soliciting agent could not. (*Iverson v. Metropolitan Life Ins. Co.*, 151 Cal. 746 [13 L. R. A. (N. S.) 866, 91 Pac. 609]; *Fidelity etc. Co. v. Fresno Flume Co.*, 161

Cal. 466 [37 L. R. A. (N. S.) 322, 119 Pac. 464]; *McIntosh v. Agricultural Fire Ins. Co.*, 150 Cal. 440 [119 Am. St. Rep. 234, 89 Pac. 102]; *Raulet v. Northwestern Ins. Co.*, 157 Cal. 213 [107 Pac. 292].)”

Cayford v. Metropolitan Life Ins. Co., 5 Cal. App. 715.

Action upon a policy of life insurance. A premium not being paid, the agent of defendant called upon insured's wife, beneficiary; was told she was unable to pay. The agent called several times later to collect, but, in fact, payment was never made. Policy contained the usual clause limiting the authority of the agent. The plaintiff relied upon the case of *Knarston v. Manhattan Life*, 124 Cal. 74, to the effect that attempts to collect the premium waived forfeiture. The court said:

“There is no doubt that this case, as claimed by the respondent, would be within the doctrine of the *Knarston* case if the acts of Pittman were the acts of the company. Counsel for the respondent argues that the possession of the receipt after its due date by Pittman, the collector of the company, implied the power to deliver it after that date; that there appeared on the face of the receipt no limitation of its validity if delivered after the due date of the premium; that accordingly, if it had been in fact delivered by Pittman, though after the due date, his act would have been the act of the company, and the forfeiture would have been waived. We cannot agree with this view. Mrs. Cayford did not know that Pittman had the premium receipt, and she knew nothing of its contents. No

knowledge of the extensions of time to pay the premium, granted by Pittman to the insured, was brought home to the company. The limitation, in the conditions of the policy, on the authority of subordinate agents to waive forfeitures or collect overdue premiums is valid. (*Shuggart v. Lycoming Fire Ins. Co.*, 55 Cal. 408; *Enos v. Sun Ins. Co.*, 67 Cal. 621 [8 Pac. 379]; *Westerfeld v. New York Life Ins. Co.*, 129 Cal. 68, 77 [58 Pac. 92, 61 Pac. 667].) The assured knew of this provision, or, what is the same thing, is charged with knowledge of it. (*Westerfeld v. New York Life Ins. Co.*, 129 Cal. 68, 77 [58 Pac. 92, 61 Pac. 667].) Under the circumstances of this case it cannot be held that the company waived the forfeiture caused by the failure to pay the premium when due. Authority to collect premiums does not imply authority to extend the time for the payment of such premiums, or to waive a forfeiture resulting from nonpayment."

Toth v. Metropolitan Life Ins. Co., 123 Cal. App. 185.

It was here contended that defendant, through its soliciting agent, had created an oral contract of insurance. The decedent, Toth, had signed an application which contained the usual clause limiting the powers of the agent. The court held that under these limitations there could not be an oral contract, saying:

"A mere soliciting agent or other intermediary operating between the insured and the insurer has authority only to initiate contracts, but not to consummate them, and cannot bind his principal by anything he may say or do during the

preliminary negotiations. (14 Cal. Jur., p. 457; *Browne v. Commercial Union Assur. Co.*, 30 Cal. App. 547, 554 [158 Pac. 765]; *Sharman v. Continental Ins. Co.*, 167 Cal. 117, 124 [52 L. R. A. (N. S.) 670, 138 Pac. 708].) The evidence in the case at bar shows without contradiction that Thomas was only a soliciting agent. He therefore had no authority to make any contract of insurance, either oral or written; and, even if we assume that he attempted to make an oral contract to insure decedent, his lack of authority so to do would prevent such purported oral contract from being valid or effective.

Moreover, the limitation of Thomas' authority as a soliciting agent of defendant was affirmatively brought to the attention of decedent when decedent made the application for insurance, which application contained the provision that no agent or any other person except officers of defendant company has power to 'make, modify or discharge any contract of insurance' or to bind the defendant in any way 'by making any promises respecting any benefits under any policy issued hereunder'; and also the provision that defendant would incur no liability under the application until it had been received, approved and a policy issued and delivered with a full first premium paid to and accepted by defendant. The decedent signed the application and it is presumed that he knew its contents. (*Fidelity & Cas. Co. v. Fresno Flume & Irr. Co.*, 161 Cal. 466, 472 [37 L. R. A. (N. S.) 322, 119 Pac. 646].) By these provisions of the application express notice was given to decedent that the officers of the defendant reserved the exclusive right to determine whether or not defendant

would insure him, and also that Thomas had no right or authority to bind defendant by any promises or purported oral agreements. (*Iverson v. Metropolitan Life Ins. Co.*, supra.) Thomas, therefore, had neither actual nor ostensible authority to make the purported oral contract relied upon by appellant and consequently no completed contract of insurance on the life of decedent, either oral or written, was ever entered into by decedent and defendant. An insurer is not bound by representations or purported agreements made by an unauthorized agent. (14 Cal. Jur., p. 458; *Fidelity & Cas. Co. v. Fresno Flume & Irr. Co.*, supra.)

An examination of the California cases, in which section 2598, Civil Code, has been referred to, will show the correctness of the statement of this honorable court in the *Gist* case (63 Fed. (2d) 732):

“Evidently the statute is directed to the situation where the premium is taken care of by a note or some other credit arrangement so that the premium has not been paid in a literal sense, since the company has not received the money therefor.”

In each of the cases, such was the situation.

In the case of *Farnum v. Phoenix Ins. Co.*, 83 Cal. 246, there was no limitation upon the agent's authority; in fact, it appears that the agent had affirmative authority to extend credit, and credit was extended.

In the case of *Griffith v. Life Insurance Co.*, 101 Cal. 627, there was no limitation upon the agent's

authority, and promissory notes were given and accepted.

In the case of *Palmer v. Continental Ins. Co.*, 132 Cal. 68, there was no limitation upon the agent's authority; in fact, the agent had the power to create contracts, and the premium was paid partly in cash and partly by note.

In the case of *Masson v. New England M. L. Ins. Co.*, 85 Cal. App. 633, there was no limitation upon the agent's authority, and the premium was paid in cash and notes.

In the case of *Courdway v. Peoples Mut. Life Ins. Co.*, 118 Cal. App. 530, the agent paid the full net premium to the company so that as between the insurer and insured there would be no question of payment.

A detailed consideration of the foregoing cases follows:

Farnum v. Phoenix Ins. Co., 83 Cal. 246.

Action upon a fire insurance policy. On May 2, 1887, plaintiffs verbally applied to the local agent of defendant for a policy of fire insurance. The policy was required to be and was countersigned by the local agent and delivered to plaintiffs on May 24. The agent agreed to give the plaintiffs a credit on the premium until October 1, and it was the custom of defendant insurance company to allow its agents to give a credit for premiums for a term of 60 days. On September 5 the property was destroyed by fire, and on September 30 payment of premium was tendered the agent. The policy as delivered recited a

consideration of \$73.50, but did not expressly acknowledge receipt of payment. Upon trial motion for nonsuit was granted. In reversing the judgment, the court said:

“It seems to be settled by a controlling preponderance of authority that an express provision in a policy of insurance that the company shall not be liable on the policy until the premium be actually paid is waived by the *unconditional* delivery of the policy to the assured as a completed and executed contract under an express or implied agreement that a credit shall be given for the premium, and that in such case the company is liable for a loss which may occur during the period of the credit. * * *

In this case the local agent of defendant at Stockton had unquestionable power to extend a credit upon the premium for the period of at least sixty days. He represented the full power of the company to make a consummated and binding contract of insurance by countersigning and delivering the policy; and when he countersigned and delivered it unconditionally as a completed contract, under a specific agreement for payment of the premium at a future date, he thereby waived, to the full extent to which the company itself could then have waived, the actual payment of the premium as a condition precedent to its liability on the policy. ‘An insurance agent clothed with authority to make contracts of insurance or to issue policies stands in the stead of the company to the assured.’ * * *

It is no answer to this to say that the Stockton agent was not authorized to give so long a credit as that given in this case,—from May

2 to October 1, 1887,—but was limited to a credit of sixty days; for it is sufficient that he had authority to give a credit of sixty days. The credit was given as a valid credit for sixty days, at least, and the giving of any credit by authority of the company was a waiver of actual payment as a condition precedent to the liability of the company. * * *

Again, the local agent at Stockton, being clothed with general power to receive proposals for insurance, and to countersign and deliver policies in San Joaquin County, is presumed to have the power of the company within that county to waive the immediate payment of premiums, and to make contracts for credit. * * *

A local agent having ostensible general authority to solicit applications and make contracts for insurance, and to receive first premiums, binds his principal by any acts or contracts within the general scope of his apparent authority, notwithstanding an actual excess of authority. * * *

The authorities before cited show that a local agent who is clothed with general power to solicit and consummate contracts of insurance within a certain territory stands in the stead of the company, and represents its whole power to give validity to the contracts which he is authorized to execute and deliver, and to waive conditions precedent to liability by oral agreement, including the condition as to the mode of waiver of such conditions precedent.”

Griffith v. Life Insurance Co., 101 Cal. 627.

Action upon two life insurance policies. Application was made by Griffith, husband of plaintiff, to one

Mouser, soliciting agent for defendant, for two policies of insurance upon his life, payable to plaintiff, under an agreement that Griffith should deliver to Mouser two promissory notes for the first annual premium. The policies were issued and one policy and one note were exchanged; Griffith requesting the other to be returned as he could not pay the note covering the premium, which was done, and the note surrendered. After maturity of the other note, Griffith being unable to pay, surrendered the policy, which was canceled and the other note returned. No premium was ever paid upon either policy. The court discussed the policies separately. The court held for the defendant as to the first policy, saying:

“Another proposition which may be considered as established is this: An express provision in a policy of insurance, that the company shall not be liable on the policy until the premium is actually paid, is waived by the unconditional delivery of the policy to the assured, as a completed and executed contract under an express or implied agreement that a credit shall be given for the premium, and in such a case the company insuring is liable for a loss which may occur during the period of credit. (*Farnum v. Phoenix Ins. Co.*, 83 Cal. 246, and cases cited.)

These propositions are stated as prescribing limitations upon the insurers in cases where the contract is fully consummated, but do not go to the essential point in our present inquiry, viz.: Was it so consummated as to bind the insurer?

Griffith had not only represented in his statement that the first annual premium had been paid in cash, but he had also agreed in the same

statement, 'that any policy which may be issued under this application shall not be in force until the actual payment to, and acceptance of, the premium by said company, or its authorized agent, during my lifetime and good health'.

We may concede that this agreement might have been waived by a delivery of the policy without such payment, but it by no means follows that the same result follows without a delivery, or that the agent would be legally bound to deliver without payment. In such a case it is the act of delivery with intent that it shall take effect that constitutes the waiver, and raises an estoppel against the insurer, and where the intent and act are wanting there is no waiver.

Up to the time of delivery the agreement to give credit was a mere personal one on the part of the solicitor, without authority from defendant, which he might and did cancel with the consent of Griffith before consummation of the contract."

In holding for the plaintiff as to the second policy, the court said:

"We think the doctrine is well settled that where a valid policy is regularly delivered in pursuance of a consummated contract, to one who has procured insurance upon his own life, payable to another, the insured cannot surrender the policy without the consent of the beneficiary.
* * *

The agents of defendant were not authorized by defendant to take any thing except money in payment of premiums. They did consent to take the note in question in lieu of money, the effect of which, according to the evidence, was that

they became individually liable to defendant for so much money, less their commissions.

It was in effect, so far as defendant was concerned, a payment of the premium to the agents who held the note in lieu of so much money with which they were chargeable. It was, as to defendant, a payment of the premium to the agents, and not an extension of the time of payment. The note was payable to order, duly indorsed, and, so far as appears, in no way referred to the premium or policy.

Under such circumstances, its nonpayment at maturity did not work a forfeiture of the policy or defeat its validity."

Palmer v. Continental Ins. Co., 132 Cal. 68.

Action upon policy of life insurance. The policy provided it should not be binding until countersigned by its general manager in Chicago. It was so countersigned and delivered to plaintiffs. It recited that it was executed in consideration of payment of \$12 and the future payment of an instalment note for \$48. The policy also provided that insurer should not be liable for any loss while the instalment was in default. The instalment due October 1 was unpaid and the fire occurred October 11. In holding for plaintiffs, the court said:

"If the defendant had given an indefinite credit to the plaintiffs,—that is, a credit generally,—without specifying the time at which the premium should be paid, its acknowledgment in the policy that it had been received would be conclusive against it in an action upon the policy. It is none the less conclusive because the time

of credit is limited to sixty days, or for the reason that the agreement for credit is evidenced by a note. There is no statement in the policy that the twelve dollars was paid by a note, or that the plaintiffs had given their note therefor, and the conclusive effect created by the statute cannot be set aside by showing that a note was given. It was competent for the defendant to accept the note of the insured as payment of the premium, and it can no more dispute the binding effect of the policy by showing that the payment was made by a note which has not been paid, than it could if it had accepted their personal credit in lieu of money.”

See also the same case,

Palmer v. Continental Ins. Co., 61 Pac. 784,
not reported in official reports.

Masson v. New England M. L. Ins. Co., 85 Cal.
App. 633.

Action upon life insurance policy. At time of delivery Masson, the insured, was unable to pay the full first annual premium; he paid some cash and the balance in notes, and the policy and receipt were delivered. The notes were unpaid when Masson died. The court, in speaking of section 2598, Civil Code, said:

“In giving application to said section it has been held in this state that where an authorized credit has been agreed upon as the equivalent or substitute for cash payment of the premium and the policy is delivered as a complete contract upon the consideration expressed therein, the re-

ceipt of which is 'impliedly acknowledged', the insurer is estopped to deny the validity of the policy, notwithstanding the declaration in it that it shall not be binding until the premium is actually paid (*Farnum v. Phoenix Ins. Co.*, 83 Cal. 246 [17 Am. St. Rep. 233, 23 Pac. 869]); also that where a promissory note is taken as the equivalent of cash payment the recital of payment in the policy does not conclude the insurer in an action upon the note from showing that the premium has not been paid, but such recital, whether or not it is in the specific language of the code, is conclusive evidence of payment, 'so far as to make the policy binding', notwithstanding any stipulation therein to the effect that it shall be inoperative if the premium is not actually paid; that the recital has the same effect as a vendor's acknowledgment in a conveyance of land of the receipt of the purchase price. (*Palmer v. Continental Ins. Co.*, 132 Cal. 68 [64 Pac. 97].)''

Courdway v. Peoples Mut. Life Ins. Co., 118 Cal. App. 530.

Action upon policy of accident and health insurance. At the time the policy was delivered to the agent for delivery to the insured, he paid the full net premium to the insurer. It was held, of course, that as between the insurer and insured the premium had been paid.

CONCLUSION AS TO FIRST QUESTION.

We may therefore conclude from the foregoing facts and argument:

First. That the application makes prepayment of the premium a condition precedent to the formation of a contract;

Second. Steinfeld, as agent, had no authority to waive this condition, and, in fact, did not waive it, because he continued to attempt to collect the premium;

Third. Nonperformance of this condition precedent and no effective waiver thereof prevented the formation of any contract;

Fourth. The motion for a directed verdict should have been granted.

SECOND QUESTION.

**THERE WAS NO MEETING OF THE MINDS OF THE PARTIES;
NOR WAS THERE IN FACT ANY DELIVERY OR ACCEPTANCE OF THE POLICIES.**

Of course, one of the essentials to the formation of a contract is that the minds of the parties meet upon the exact terms; and one of the legal requirements to the taking effect of a contract in writing is delivery and acceptance. Section 1626, Civil Code, provides:

“A contract in writing takes effect upon its delivery to the party in whose favor it is made, or to his agent.”

Section 1627, Civil Code, provides:

“The provisions of the chapter on transfers in general, concerning the delivery of grants, abso-

lute and conditional, apply to all written contracts.”

Section 1054 (being the section referred to in section 1627) provides:

“A grant takes effect, so as to vest the interest intended to be transferred, only upon its delivery by the grantor.”

Manual delivery must be accompanied by an intent that it be effective.

9 *Cal. Juris.* 153.

The court will recall that Walter E. Frey made application for three policies, as follows:

\$35,000.00 payable to San Francisco Milling Company;

\$10,000.00 payable to Herbert E. Frey, his brother;

\$10,000.00 payable to Selma Steventon, his sister.

Two only of the policies were issued, one for \$10,000.00, payable to Herbert E. Frey, as beneficiary, and one for \$10,000.00, payable to Selma Steventon, as beneficiary. These were delivered by Mr. Murray, the cashier, to Mr. Steinfeld. At the same time, however, there was delivered to him papers called “slips” in the testimony; one for each policy. A sample is contained in “Defendant’s Exhibit J” (Tr. p. 76), and was in the following form:

“New Business.

Stoppage Form.

This advice does not modify or change any existing rules.

To the Manager of the San Francisco Office:

From G. Trowbridge, Assistant Secretary and Registrar.

March 9, 1932.

The enclosed policy, No. _____, Insured's name Walter E. Frey, must not be delivered or the first premium accepted thereon until and unless the request written below has been executed by the insured. This form when properly executed as above is to be returned to the Registrar's Division at the Home Office, G. Trowbridge, Assistant Secretary and Registrar, The Mutual Life Insurance Company of New York."

It is signed Mutual Life Insurance Company of New York with a blank for the date. Then it says:

"Referring to the above-numbered policies the undersigned hereby accepts the said policies issued as follows:"

Mr. Murray testified that Mr. Steinfeld could not deliver the policies without having these "slips" signed by Walter E. Frey. He testified (Tr. p. 75):

"The agent has no authority to deliver a policy where there is a stoppage form like Exhibit J, which is given to him at the time the policies are given for delivery. The policy is given to the agent solely on condition that they will obtain the proper signatures that are required, and acceptance, before delivering the policies."

And, again (Tr. p. 78):

Not only did the application make prepayment of the premium a condition precedent, but apart from that, Mr. Steinfeld had no authority to deliver the

policies without payment of the premium. In this respect Mr. Murray testified (Tr. p. 75):

“Mr. Steinfeld is a soliciting agent. He has no authority whatever to make any contracts or agreements on behalf of defendant. His duties are merely the soliciting of applications and the turning in of the applications to my office.

The Court. Q. You say he has no authority to do what?

A. He has not any authority to bind the company, or make supplemental contracts.”

In referring to “Exhibit J”, Mr. Murray continued his testimony (Tr. p. 76):

“I might also say that the other condition of delivery of the policy is that he shall collect the premium while the applicant is in good health.”

And, again referring to “Exhibit J”, Mr. Murray testified (Tr. p. 77):

“Mr. Boland. That is the form [Exhibit J] which I understand was to be executed.

The Court. That must be executed upon delivery of the policies.

Mr. Boland. Upon the delivery of the policies.

Q. And also the premium paid while the applicant is in good health?

A. Yes.”

Mr. Steinfeld testified (Tr. p. 61):

“I am an agent for defendant. I solicit applications. I have nothing whatever to do with the issuance of policies. If a policy is issued, I endeavor immediately to get the premium. It is a rule of the company that no policy shall be delivered without an inspection receipt, releasing the

company from any liability in the event of death, before the check or the money is paid. The inspection receipt has to be delivered or the money paid.”

In this respect, also, therefore, there could be no meeting of the minds of the parties as to the delivery and acceptance of the policies without payment of the premium.

As appears from the statement of the case, there was clearly no meeting of the minds of the parties. It is true, the policies were taken out to the “Mill” and left with Herbert E. Frey and Selma Steventon, but they were subsequently returned and sent to the Home Office in New York, and canceled. Aside from any other reason for returning the policies and cancelling them, the following colloquy between the court and witness, Steinfeld, is sufficient (Tr. p. 103):

“The Court. Q. As a matter of fact, you stopped the payment on the check, so that the insurance company was without any money, wasn’t it?

A. Yes.

Q. The premium had not been paid?

A. No.

Q. The policies were out for six or seven weeks?

A. Yes.

Q. Finally the company said to you, ‘Get those policies’?

A. Yes.”

And he did get the policies—they were canceled.

No request was ever made by Walter E. Frey, Herbert E. Frey or Selma Steventon for the return to them, or any of them, of the policies; but, on the contrary, new and different policies were requested, and Walter E. Frey, on June 1, underwent a second physical examination ("Defendant's Exhibit A", Tr. p. 55), and the new and different policies, as requested, were issued in New York and sent to the San Francisco agency. Then there was an attempt on the part of plaintiff and his associates to secure delivery of these second policies, even after the death of Walter E. Frey. Would he and his associates have done that if they had considered the earlier policies in force? Obviously not. Plaintiff and his associates knew they were not. They knew the policies had been surrendered to Mr. Steinfeld. They never asked or suggested their return. They were anxious to get the substitute policies. They never paid or attempted to pay the premium until after the death of Walter E. Frey. It seems too plain for argument that there was never any meeting of the minds of the parties as to the policies here in question.

The motion for directed verdict should have been granted.

THIRD QUESTION.

THE APPLICATION MAKES GOOD HEALTH OF WALTER E. FREY A CONDITION PRECEDENT. WALTER E. FREY WAS NOT IN GOOD HEALTH.

The application provides:

“The proposed policy shall not take effect unless and until delivered to and received by the insured, the beneficiary or by the person who herein agrees to pay the premiums, during the insured’s continuance in good health, and unless and until the first premium shall have been paid, during the insured’s continuance in good health.”

The application was made on March 4. It will be contended, I assume, that the policies in question were delivered (and became effective) on or about April 15. Walter E. Frey died on the night of June 3-4. Good health is a condition precedent. A discussion of the law upon this subject would be supererogatory. This honorable court has recently discussed and decided the question in favor of the appellant’s position in the case of *New York Life Ins. Co. v. Gist*, 63 Fed. (2d) 732. The decisions in the other circuits upon this subject are unanimous. (See “first question”.) The burden of proof to establish good health is upon the plaintiff. It was said in *Greenbaum v. Columbian Nat. Life Ins. Co.*, 62 Fed. (2d) 56:

“Because a new trial will be required, it is well to express our views on the burden of proof on the issue of sound health. There is authority to the effect that such a clause as these policies contained regarding the effective date of the in-

insurance makes the question of sound health only a matter of defense, but that view seems to give too little force to the fact that the parties expressly agreed that no insurance should take effect until the policies were delivered and the first premiums paid while the proposed insured was in sound health. Regardless of what may be necessary in any particular case to prove sound health as of the decisive time either *prima facie* or ultimately, we think it is a condition precedent with the burden on the plaintiff to prove it by a preponderance of all the evidence in order to show that the defendant ever became bound as an insurer.”

Doctor Berger was called as a *fact* witness—not an expert witness—for defendant-appellant. Doctor Berger was for a number of years the autopsy surgeon to the Coroner of San Francisco. He had autopsied thousands of this type of case. (Tr. p. 45.) He performed two autopsies upon the body of Walter E. Frey, on June 4, the morning after his death. He stated (Tr. p. 44):

“I determined to my satisfaction the cause of death, which I recorded as acute dilation of the heart, chronic myocarditis, and coronary sclerosis with occlusion, the latter being the immediate cause. I was unable to find any indication of any other pathology, that is, any other disease; no evidence of any injury. * * *. Subsequently I examined the same body and again carefully reviewed the condition of the heart, and I confirmed my former opinion as to the cause of death, and so signed the death certificate.”

He then testified (Tr. p. 46):

“From my experience and the examination made, this disease existed on March 4, April 15 and June 1, and probably existed long prior to March 4. From my experience as a physician, and my examination of the body, Walter Frey was not in good health on April 15.”

Doctor Allen, examining physician for defendant-appellant, stated (Tr. p. 53) that he had heard the testimony of Doctor Berger, and testified:

“If the condition had been disclosed to me, whether on my examination or otherwise, Walter Frey would not have been accepted for insurance by the defendant. He would not have been considered an insurable risk. With ordinary sclerosis, as described by Doctor Berger, Walter Frey would not be in good health on April 15.”

Doctor Moody was called (as an “expert”) for the defendant. (Tr. p. 60.) He stated:

“I heard the testimony of Doctor Berger and Doctor Allen, and I heard Doctor Berger’s description of the condition of the body of Walter Frey as he discovered it upon autopsy. I should not consider a person in the condition which he described to be in good health on the preceding April 5.”

The day after these doctors had testified, plaintiff and appellee called Doctor Bernard Kaufman. Doctor Kaufman did not hear the testimony of Doctor Berger. He had never seen Walter E. Frey and knew nothing of the case except as it was presented to him in conversation with appellee’s attorney and

the questions which were asked him at the trial. Upon cross-examination he stated (Tr. p. 92):

“I was first consulted with reference to my testimony in this case at nine o’clock last night [this was after the other doctors had testified], and charging a fee for my services as expert. I discussed the case with Mr. Eisner, of course, and the only thing I know about the case is from my conversation with Mr. Eisner last night, and the questions which he has put to me today. That is all I know about it.”

With respect to his testimony, I shall show, I think, conclusively that there is no conflict between the testimony of Doctors Berger, Allen and Moody, on the one hand, and Doctor Kaufman, on the other hand. Doctor Berger did not come as a so-called “expert”. He testified to facts within his own knowledge and observation. Doctor Kaufman came admittedly as an “expert”, charging a fee for his services, with no knowledge other than such as he had acquired from plaintiff’s counsel the night before and the hypothetical question presented to him. It is my opinion—and I think the observations of the judges which will be quoted hereinafter will substantiate that opinion—that the testimony of one so-called “expert” based upon an hypothetical question can rarely if ever prevail against testimony as to facts, observations and the conclusions drawn therefrom by a skilled person.

Again, however, assuming that I am wrong in this opinion (as I frequently am), then I believe I can easily demonstrate that there is no conflict in the testimony of Doctors Berger, Allen and Moody, on the one hand, and Doctor Kaufman, on the other.

I will treat the latter point first; that is, that there is no conflict in the testimony. I am placing in parallel columns the testimony of Doctor Berger as to his findings of fact, and opposed to that, the hypothetical question addressed to Doctor Kaufman:

Testimony of Doctor Berger
(Tr. p. 44):

"I based that conclusion on the following factors in my examination: The finding of that defective pathology, that defective disease, which is not seen in normal health, and the elimination of any other disease or injuries of any kind. The heart, in itself, was acutely dilated. It was ballooned out in all of its chambers, the heart being a four-chambered organ, filled with blood. The heart, in itself, was about one and one-half times its normal size, with scattered areas throughout of muscular or fibrous replacement. That is the result of injury to the heart muscles at some previous time. The coronary vessels—those are the vessels which cut off the large artery in the body that supplies the heart muscle with blood, itself, I found to be thickened and hardened. That is termed sclerosis of those vessels. On the left side the immediate branch of the left coronary vessel I found to be completely shut off. That is a condition that cannot exist

Testimony of Doctor Kaufman (Tr. p. 85):

"Q. If I told you, Doctor, that an autopsy surgeon found a heart acutely dilated in all chambers and filled with a dark fluid blood, the heart about one and one-half times its normal size, and there are scattered regions of fibrosis throughout; the coronary vessels of the left side indicate a marked thickening and in the descendens branch about one and one-half inches from its origin there is a complete occlusion by virtue of marked sclerosis of the vessel. There is no acute infarction seen. The coronary vessels of the right side, although thickened to a moderate degree, are in no way comparable to those of the left side. There is some sclerosis at the aortic cusps. The cusps are not flexible. Do these findings *necessarily* indicate that the person examined was not in good health prior to the time of death?"

OBSERVE THE USE OF THE WORD
"NECESSARILY".

Testimony of Dr. Berger (Tr. p. 44) continued:

with life and not show any further damage to that particular portion of the heart. I saw no evidence by its closure that it had caused any acute or very immediate disease. I concluded that the individual had died so quickly that no acute disease as the result of this closure of that vessel could have formed. This I know, from my past experience in the examination of thousands of these types of heart, is a cause for immediate death. The occlusion is the cause for immediate death. *I found that the heart was a chronic heart; by that I mean there had been pre-existent disease as distinguished from acute.*"

It is obvious the hypothetical question is not complete and it was objected to on that ground. (Tr. p. 85.)

The answers are also in parallel columns:

Testimony of Doctor Berger (Tr. p. 46):

"From my experience and the examination made, this disease existed on March 4, April 15 and June 1, and probably existed long prior to March 4. From my experience as a physician, and my examination of the body, Walter Frey was not in good health on April 15."

Testimony of Doctor Kaufman (Tr. p. 86):

"A. No.

Q. They do not necessarily so indicate?

A. No."

Note the form of the question:

“Do these findings *necessarily* indicate that the person examined was not in good health prior to the time of death?”

And the answer:

“A. No.

Q. They do not *necessarily* so indicate?

A. No.”

This is a “NEGATIVE PREGNANT.” It denies nothing. Doctor Berger’s testimony is to the point and positive. He says:

“I found that the heart was a chronic heart; by that I mean there had been pre-existent disease as distinguished from acute.”

And his statement is equally positive that Walter E. Frey was not in good health, and he says:

“From my experience and the examination made, this disease existed on March 4, April 15 and June 1, *and probably existed long prior to March 4.*”

Merely stating that the conditions found do not “*necessarily*” indicate lack of good health, *admits* that they *may* indicate lack of good health. In fact, in a pleading it would be an admission that there was lack of good health. Certainly, it cannot raise an issue against the positive testimony of Doctor Berger, *and the established fact that the man died of the exact disease.* This, of course, is uncontradicted. If Walter E. Frey were still alive, and the “experts” were disputing as to the effect certain symptoms dis-

closed, then such testimony might be of some value as throwing some doubt upon some other witnesses' testimony; *but here we are confronted with the actual fact that he actually died of the particular disease.*

Doctor Kaufman was equally evasive in another respect. Doctor Berger testified that Frey's heart was enlarged about one and one-half times normal size. (Tr. p. 45.) He said (Tr. p. 47):

"I can tell very closely by the size of the heart, as I find it relaxed after death, what the size of the heart, as I find it relaxed after death, what the size of that heart was in normal life. I would not have to weigh it. I think I can accurately determine that fact."

He further said:

"A heart that is acutely dilated, as this heart was, and which you have properly stated is not a dilation but a relaxation, when opened and allowed to empty itself of the contents of its chambers and then brought back to its position as it should normally be, is a very close consideration of what it was in life. Of course, if it is allowed to stand or lay ballooned with its clotted blood, we cannot very well tell. *That is a routine part of the examination, to cut the heart in such a way that the entire inside of the heart is exposed, and that the entire free blood which is not part of some disease is eliminated from it. I certainly did that in this instance. I was able to ascertain whether or not this heart was in lifetime an enlarged heart. I said it was about one and one-half times the normal heart.*"

Dr. Kaufman testified (Tr. p. 89):

“To the question whether it is possible for an autopsy surgeon simply to squeeze the heart together, or to squeeze the blood that is in the heart out of it, and to determine from that that the man had a heart enlarged during his lifetime, *my answer is I know of no authorities that will allow that method of determining the size of a heart.*”

Doctor Berger had, as he testified, “autopsied” hundreds and hundreds of those types of cases. (Tr. p. 52.)

It is no denial of Dr. Berger’s positive testimony, based upon observation, knowledge and experience, for Doctor Kaufman to say that he knows “no authorities that will allow that method of determining the size of a heart.” There may not be any, and if there were, he might not have read them.

There is another matter which will probably be urged in this connection. Walter E. Frey was examined about March 5, by Doctor Allen, and again on June 1, and at neither time did he discover the heart condition. In this connection Doctor Allen testified (Tr. p. 53):

“I heard the testimony of Doctor Berger. In most instances the condition of the body of Walter Frey, which he described, *would not be ascertainable by me on the usual life insurance medical examination.* There are special methods, special examinations of discovering that. These are not ordinarily used in the medical examination for life insurance.”

Doctor Moody testified in the same connection (Tr. p. 61):

“In a way I am familiar with the ordinary type of insurance medical examination. I have never made any insurance examination, however. With my knowledge of that custom and practice, and the condition of this body, as it has been described, I think that condition could be overlooked by an insurance medical examiner. As a matter of fact, I have seen similar conditions many times that have been overlooked by competent medical men.”

Doctor Berger testified in this connection (Tr. p. 45):

“Mr. Boland. Can you tell us, Doctor, from your experience and your examination of the body, whether this disease could be detected by the ordinary medical examination which would ordinarily be made for insurance companies, or just an ordinary medical examination in your office?”

A. In many, many instances that type of heart is entirely missed.

Q. How can it be discovered?

A. There are certain procedures, very technical, that we may go through with. To determine its size, you may find that by X-ray. To determine this particular type of disease might be determined by other technical examinations—electrocardiogram, and various other pulse registrations which are highly technical and do not come into the ordinary course of an examination. I am familiar with the usual type of insurance medical examination. This disease could be very easily *not* detected by that type of examination.”

Doctor Kaufman again ventured a qualified denial. He said (Tr. p. 89):

“It is *reasonable* to expect that if a patient has a materially enlarged heart, for example, one and one-half times normal size, that such a fact would be found by a physical examination, *except there be a deformity of the chest wall of such a character that would make a physical examination not an average examination.*”

Observe it is only “reasonable”; not even “necessarily”.

However, at least one court has completely answered the proposition in a very similar case.

Scharlach v. Pacific Mut. Life, 16 Fed. (2) 245.

“To say the least, it is questionable whether there was the slightest inconsistency between the evidence to the effect that the deceased was not in good health when the policies were delivered and the evidence relied on by the plaintiff in error. Dr. Judd’s statement that there was no way of telling how long the deceased had been suffering from cancer was consistent with the truth of the testimony to the effect that the ulcer disclosed by the operation proved that the cancer had been in existence since prior to May 12, 1923. A cancer disclosed by an operation may not be evidence sufficient to support a finding as to how long it had existed, and at the same time be conclusive proof that it had been in existence several months. There was no material conflict between the other testimony relied on by the plaintiff in error and that to the effect that deceased was not in good health on May 12th, when the policies were delivered. The testimony of the physicians who

treated the deceased or examined his blood prior to that date indicated that the deceased then had no serious ailment, which was disclosed by his outward appearance or was discoverable without a physical examination of him which included a count or testing of his blood.

Where the disease is one the existence of which at a given stage of it is not discoverable, even by a skilled physician, except by ascertaining existing symptoms and making an examination of the blood of the person in question, a finding by a physician, based on such an examination, that that person has such disease, cannot well be said to be put in issue or impeached by a finding of the absence of disease by another physician, who made no such examination, and from whom the symptoms suggesting such examination were concealed, or by testimony, based only on observation of such person's outward appearance, that he then seemed to be in good health. Obviously such evidence lacks probative value, where the question is whether a person has or is free from a disease or ailment which is not discoverable by merely observing the outward appearance of that person. *Metropolitan Life Ins. Co. v. Betz*, 44 Tex. Civ. App. 557, 99 S. W. 1140.

The setting up of the testimony relied on by the plaintiff in error against the otherwise uncontroverted testimony to the effect that the deceased was not in good health when the policies were delivered may be compared with an attempt to contradict testimony as to the color of a thing given by a witness who is capable of distinguishing colors by testimony on that subject by a witness who is color blind and cannot tell one color from another. But, assuming that the evidence

relied on by the plaintiff in error, if standing by itself, was sufficient to support a finding that the deceased was in good health when the policies were delivered, it was not such evidence as reasonably could be given the effect of rebutting or contradicting the evidence which showed that the deceased then had a serious internal disease, the existence of which was not disclosed by his outward appearance.”

I shall now refer to my opinion that the testimony of one so-called “expert”, based on a hypothetical question, can rarely if ever prevail against testimony as to facts, observations and the conclusions drawn therefrom by a skilled person. The privilege of calling expert witnesses is one subject of much abuse. It frequently serves a useful purpose, but such testimony should be treated with caution, as was said by the Supreme Court of California, in *Grigsby v. Clear Lake Water Co.*, 40 Cal. 396, and also 22 *Corpus Juris*, p. 735, “Evidence”, Sec. 825.

Grigsby v. Clear Lake Water Co., 40 Cal. 396.

“Ordinarily, it is true, witnesses testify only as to facts, leaving it to the jury to draw their conclusions, but upon matters of science and questions requiring peculiar skill an exception is made. These witnesses ought, perhaps, to be selected by the Court, and should be impartial as well as learned and skillful. A contrary practice, however, is now probably too well established to allow the more salutary rule to be enforced, but it must be painfully evident to every practitioner that these witnesses are generally but adroit advocates

of the theory upon which the party calling them relies, rather than impartial experts, upon whose superior judgment and learning the jury can safely rely. Even men of the highest character and integrity are apt to be prejudiced in favor of the party by whom they are employed. And, as a matter of course, no expert is called until the party calling him is assured that his opinion will be favorable.”

22 *Corpus Juris*, p. 735, “Evidence”, Sec. 825.

“The general uncertainty and persistent disagreement of authority on many lines of professional and scientific inquiry, the fact that this class of evidence deals so largely with the problematical and the conjectural, and the consideration that there are other elements of unreliability arising from human frailty, bias, loyalty to one’s employer, pride of opinion, self-interest, or the heat engendered by controversy, which more or less unconsciously warp the mind of the witness, even without the more vulgar elements of venality and the absence of any efficient punishment for perjury, have caused courts of the highest eminence to feel that experts are frequently rather the hired advocates of the parties than men of science placing their special experience at the service of the cause of justice. These considerations have caused the courts to characterize this class of evidence unfavorably as rather unreliable, not of great probative force, weakest and most unreliable, the weakest character of testimony, the lowest order of evidence, the lowest grade of evidence that ever comes into a court of justice, the most unsatisfactory character of evidence, wholly worthless for any judicial purpose, and of less

than no value; to rule that such evidence should be received with caution, with narrow scrutiny and with much caution, and even that it should never be received at all except when absolutely necessary; and to consider that the statement of an inference or judgment is inferior in probative effect to a statement of fact.”

However, Doctor Kaufman was, as we have seen, sufficiently cautious as to probably avoid the aspersions usually cast upon such testimony; but also probably to render his testimony useless and abortive.

But we have here a case: Doctor Bergér, an unbiased witness (not called merely as a paid “expert”) who performed not only one autopsy but two autopsies upon the body of Walter E. Frey, simply as a matter of duty as autopsy surgeon to the Coroner. His testimony is based upon facts and observations, and his deductions therefrom as an experienced autopsy surgeon. On the other hand, we have Doctor Kaufman, a paid “expert” rushed into the case after an evening conference with appellee’s counsel; knowing nothing of the subject of controversy except as he may have acquired such knowledge during this conference. I have gone to some pains to find a series of quotations from cases involving just such a situation. It will be useless for appellee to point out that in each of these cases the remarks quoted were used in regard to a disputed question of fact resulting in the verdict of the jury. I know that already, and I frankly so tell the court. The merit in these quotations is not as *stare decisis*, but merely as being observations of judges of experience and learned in the law.

Morewood v. Enequist, 64 U. S. 49, 16 L. ed. 516.

“Where witnesses of proper skill and experience have formed their judgment from a personal examination of the subject of the controversy, their opinions are generally more worthy of confidence than those elicited by hypothetical questions, which may or may not state all the accidents and circumstances necessary to form a correct conclusion.”

McCardle v. Indianapolis Water Co., 272 U. S. 400, 71 L. ed. 316.

“The testimony of competent valuation engineers who examined the property and made estimates in respect of its condition is to be preferred to mere calculations based on averages and assumed probabilities.”

In re Ward, 194 Fed. 89, 91.

“Moreover, the clear weight of the alienists’ and physicians’ testimony is to the same effect. Of the alienists called by the respondent, two of them, as well as both the general medical practitioners, had Ward under treatment, and their testimony has therefore correspondingly greater weight than the hypothetical testimony produced by the petitioners.”

Cornec v. Baltimore & O. R. Co., 48 Fed. (2d) 497.

“Eyewitnesses, whom the judge found to be truthful, so testified; and the only substantial evidence to the contrary is the opinion of one of the experts. Direct evidence of an occurrence is, of course, entitled to greater weight than

opinion evidence [Lancashire Shipping Co. v. Morse Dry Dock & Repair Co. (D. C.), 43 F. (2d) 750]; and we should hesitate to base a finding upon the opinion evidence here, which is opposed to the overwhelming weight of the testimony of eyewitnesses.”

Finke v. Hess, 174 N. W. 466 (Wis.).

“True, after the operation it appears one side of plaintiff’s face was paralyzed, but in order to warrant the court in submitting the case to the jury there must be some evidence that the defendant severed the facial nerves; and we find none in the record. There is positive evidence, not only by defendant, but by Dr. Beck, a Chicago specialist, that the nerve was not severed. Dr. Beck opened up the old scar in an effort to relieve pressure on the nerve, and testified that the nerve had not been severed. * * *

Some reliance is placed on the opinion of Dr. Boyce. But his opinion could not raise a conflict with the positive undisputed evidence that the nerve was not severed, and that other causes existed for the paralysis. *Baxter v. Chicago & N. W. Ry. Co.*, 104 Wis. 307, 80 N. W. 644; 2 Moore on Facts, Sec. 1236.”

DeDonato v. Wells, 41 S. W. (2d) 184 (Mo.),
82 A. L. R. 1331.

“It is proper for a medical expert to testify and give his opinion either from facts within his own knowledge and observation, or from hypothetical facts, or from the two combined. * * * It would also seem obvious that, where the witness’ opinion is based on and supported by his personal observation and knowledge, it is more

likely to be correct than when the facts are merely hypothetical. In the former case, not only are his superior knowledge, training, and experience exercised to form correct conclusions on the facts, but also in discovering and correlating material and relevant facts."

In re De Lin's Estate, 294 Pac. (Ore.) 600.

"We cannot give to expert testimony based on hypothetical questions the same weight we do the direct and positive testimony of the doctor who treated testate. The latter has a great advantage over the former. Dr. Smith, who did see her, examined her, conversed with her, is very positive in his testimony that the testate was mentally competent. He had every opportunity of observing the testate, and would have discovered her mental incapacity if she had been mentally unsound."

Bishop v. Scharf, 241 N. W. (Iowa) 3, 8.

"The opportunity of Dr. Dean, Dr. Koch, and the nurse to observe the testatrix and to know at first hand the facts from day to day, gives to their testimony significance and weight that cannot be given to conclusions based upon mere hypothetical facts."

Colburn v. Kenyon Steel Pump Co., 214 N. W. (Minn.) 29, 30.

"It is a general rule of evidence that, where witnesses of proper skill and experience have formed their judgment from a personal examination of the subject of the controversy, their opinions are generally more worthy of confidence than those elicited by hypothetical questions which may or may not state all circumstances

necessary to form a correct conclusion. *Morewood et al. v. Enequist*, 23 How. 491, 16 L. ed. 516; 11 R. C. L. 578.”

Linn v. Terrell Compress & Warehouse Co.,
142 So. 193 (La.).

“It is the contention of plaintiff that Linn’s death was due to overexertion, causing an acute dilation of the heart and an aggravation of the condition of chronic myocarditis, with which a post mortem examination disclosed Linn to be afflicted. In support of the position of plaintiff, Dr. George Roeling, the coroner for the parish of Orleans, testified that Linn’s death was due to chronic myocarditis and acute dilation. Dr. George Dempsey, who had been the physician of Mr. Linn for a number of years, testified that acute dilation is due to shock and unusual exertion, because ‘a man could have chronic myocarditis and live for years if he did not over-exert himself.’ * * *

It thus appears that the testimony of Dr. Duval is not inconsistent with the findings of the coroner who performed the autopsy on Mr. Linn, and, in the respect that his findings and conclusions may differ from those of Dr. Dempsey, we believe they should prevail, because, from the record before us, Dr. Duval appears to have had great experience, having performed some ten thousand autopsies, and he is a specialist in pathology, whereas Dr. Dempsey is, we understand, a general practitioner.”

Vincennes Water Supply Co. v. Public Service Commission, 34 Fed. (2d) 5.

“On the other hand, neither Carter nor Wenger ever saw any of the mains or any of the

meters, except some in the office building, which were not examined. They did not examine the inside of any of the equipment, or any of the mains in use, or any of the surface pipes. Mr. Wenger testified that he was not interested in opening any of the pipes and taking out sections. 'Opinion evidence, to be of any value, should be based either upon admitted facts or upon facts, within the knowledge of the witness, disclosed in the record. Opinion evidence that does not appear to be based upon disclosed facts is of little or no value.' *Balaban & Katz Corp. v. Commissioner of Internal Revenue (C. C. A.)*, 30 D. (2d) 807."

The result of all this discussion is that the evidence is affirmative and positive that Walter E. Frey was not in good health, and that because good health is a condition precedent to the formation of a contract, the motion for a directed verdict should have been granted; that the testimony of Doctor Kaufman raises no substantial issue of fact. His testimony was so qualified (for which we give him praise) as to be of no value to plaintiff-appellee, and to have raised no conflict. His testimony does not amount to even "a scintilla". Under such circumstances a motion for a directed verdict must be granted.

Gunning v. Cooley, 281 U. S. 90, 74 L. ed. 720.

The rule with respect to directed verdicts is stated as follows:

"When, on the trial of the issues of fact in an action at law before a Federal court and a jury, the evidence, with all the inferences that justifiably could be drawn from it, does not constitute a sufficient basis for a verdict for the

plaintiff or the defendant, as the case may be, so that such a verdict, if returned, would have to be set aside, the court may and should direct a verdict for the other party.' *Slocum v. New York L. Ins. Co.*, 228 U. S. 364, 369, 57 L. ed. 879, 882, 33 Sup. Ct. Rep. 523, Ann. Cas. 1914D, 1029.

A mere scintilla of evidence is not enough to require the submission of an issue to the jury. The decisions establish a more reasonable rule 'that in every case, before the evidence is left to the jury, there is a preliminary question for the judge, not whether there is literally no evidence, but whether there is any upon which a jury can properly proceed to find a verdict for the party producing it, upon whom the onus of proof is imposed.' *Schuykill & D. Improv. & R. Co. v. Munson*, 14 Wall. 442, 448, 20 L. ed. 867, 872; *Pleasants v. Fant*, 22 Wall. 116, 122, 22 L. ed. 780, 783."

CONCLUSION.

It is respectfully submitted that each of the questions should be answered in the affirmative; that is, in favor of the appellant; and that the judgment should be reversed and the court directed to enter a verdict for the defendant-appellant.

Dated, San Francisco,
February 14, 1934.

F. ELDRED BOLAND,
KNIGHT, BOLAND & RIORDAN,
Attorneys for Appellant.

No. 7297

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK (a corporation),

Appellant,

VS.

HERBERT E. FREY,

Appellee.

BRIEF FOR APPELLEE.

NORMAN A. EISNER,

Mills Building, San Francisco,

CARL R. SCHULZ,

Merchants Exchange Building, San Francisco,

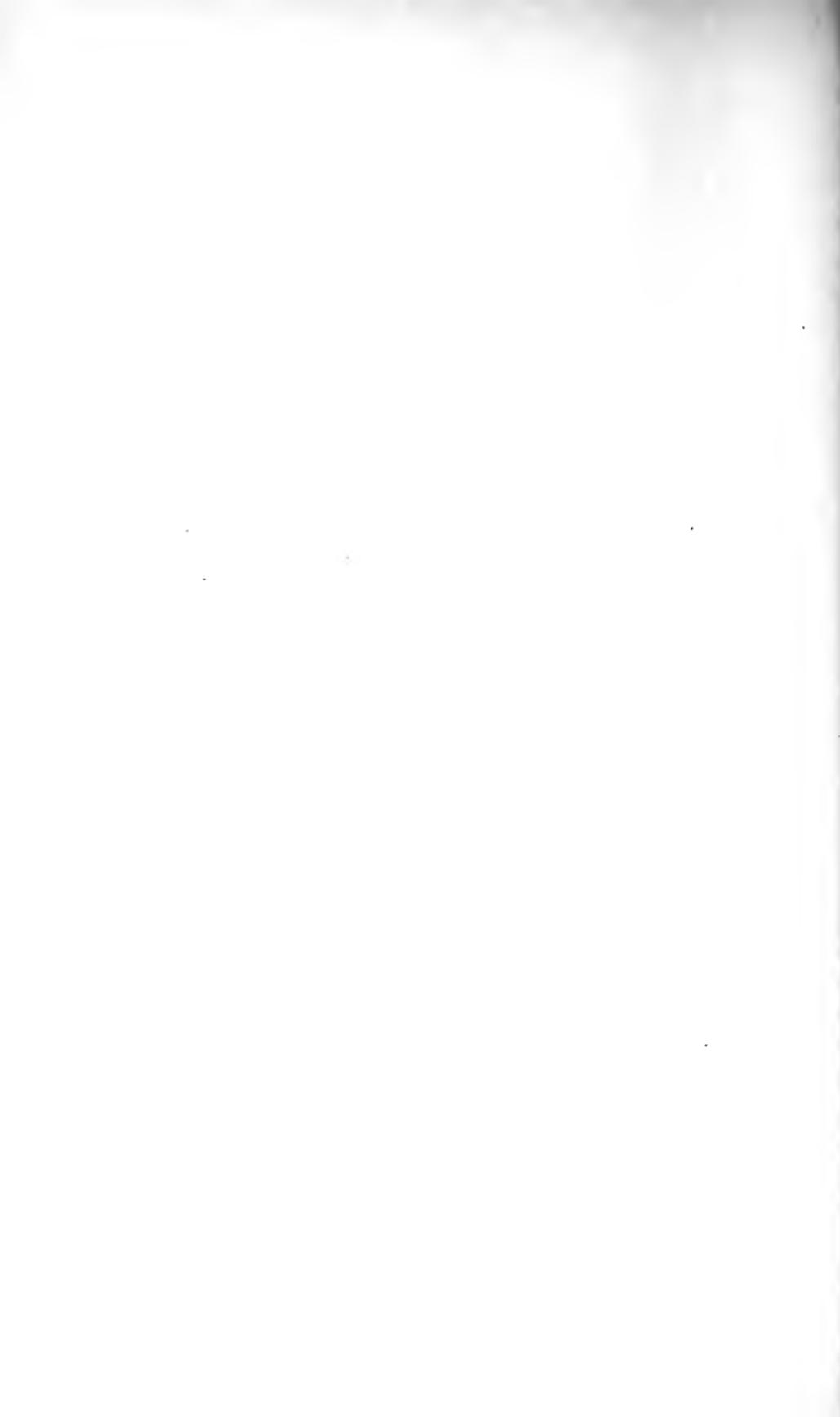
Attorneys for Appellee.

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PAUL P. O'BRIEN,

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No. 7297

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK (a corporation),

Appellant,

VS.

HERBERT E. FREY,

Appellee.

BRIEF FOR APPELLEE.

STATEMENT OF FACTS.

Appellant's statement in the case is neither complete nor fair. Walter E. Frey, Herbert Frey and Selma Steventon were brothers and sister, and John Steventon is the son of Selma Steventon. They together constituted, for all practical purposes, the ownership and management of the San Francisco Milling Company, a corporation. Between the corporation and the individuals they had been carrying \$55,000.00 insurance on the life of Walter E. Frey and a similar amount on the life of Herbert Frey. Lester A. Steinfeld, who had been connected with the defendant for twenty years, had his office with the defendant in San Francisco and used the title of City Manager of the defendant company, had been acquainted with Walter

Frey and Herbert Frey for ten years. He knew of the life insurance they were carrying. He solicited them to cancel the policies that they then had and to let him write a cheaper insurance in a similar amount in his (defendant) company. "The deal was to take some less expensive insurance to replace insurance that was more costly." (Tr. p. 71.) As a result of his persuasion and solicitation he obtained the business. Exactly what he planned to do appears in a memorandum in his own handwriting introduced in evidence as plaintiff's Exhibit 5 and which reads as follows:

"Have Equitable Life Insurance policy and Travelers made over into two separate policies on each life. Herbert's policy to be cancelled and replaced with Mutual Life term insurance. Walter's policy to be taken over by Herbert Frey and Selma Steventon to replace Equitable Life Insurance Society's policies." (Tr. p. 73.) (Pltf's. Ex. 5, Tr. p. 175.)

On March 4, 1932, Steinfeld had Walter E. Frey sign an application for insurance in defendant company. The amount of the application is exactly \$55,000.00. (Tr. p. 64.) Walter Frey was then forty years of age. The application shows upon its face that the only insurance then outstanding on the insured's life was \$55,000.00 with the Equitable Life Assurance Society. (Tr. p. 64.) The request was that \$35,000.00 of the insurance be made to the San Francisco Milling Company and \$10,000.00 each to Herbert Frey and Selma Steventon.

Appellant makes no claim of fraud or concealment.

On the 5th day of March, 1932, Walter Frey was examined by Dr. H. W. Allen, the medical examiner of defendant company. Dr. Allen's report of his examination is in evidence, and he was called by plaintiff and testified as a witness. The report and the examination were in all respects favorable and the insurance was recommended. About March 8, 1932, the company sent two policies for \$10,000.00 each, payable to Herbert Frey and Selma Steventon, respectively, to Steinfeld. The policies were not delivered, however, because "a question arose because Walter Frey very frankly said that he wanted us to know that he intended to make an aviation flight with his superintendent in a private plane." (Tr. p. 72.) The two policies without delivery were returned to the company. Then Steinfeld persuaded Walter Frey to agree, and sign a statement to the effect (dictated by Steinfeld), that he would confine his flying to regular commercial air-lines with licensed pilots, between definitely established airports. (Tr. p. 72.) This was acceptable to the company and about April 8, 1932, two new policies with aviation riders annexed were sent out from New York. The policies were first received by Mr. Gerald W. Murray, the San Francisco cashier of defendant, and by him turned over to Steinfeld. These were the two policies upon which the jury found in favor of the plaintiff. It will be noted that they are dated March 8, 1932, and annual premiums are due on March 8th of each year. (Tr. p. 148.)

When the cashier gave Steinfeld the policies, Steinfeld gave the company his personal check for the

amount of the first year's premium, less his commission of forty per cent (40%). In addition to receiving the policies, which expressly acknowledged receipt and payment of the first year's premium upon their face, Steinfeld received a separate receipt for the payment of the premium in full. (Tr. p. 72.) He immediately brought the policies and the receipt, enclosed in customary policy envelopes, out to the San Francisco Milling Company and delivered the policies and the receipt to Selma Steventon and Herbert Frey, the beneficiaries, with the following words, from his own testimony:

“Here you are, here are your policies, here is a receipt from the company, I paid the money, I didn't take any chances that the company might recall the policies on me, I have taken it upon myself to pay the premiums, here they are.” (Tr. pp. 72-73.)

With further reference to the absolute delivery of the policies to the beneficiaries, Mr. Steinfeld further testified that there was no reason to take and he did not take a regular and customary form of receipt furnished by the company where policies are left for inspection only and are not to be in effect although placed in the possession of the beneficiary. (Tr. pp. 96, 97.)

“Q. You delivered the policies and paid the premium; you must have thought they were effective then?

A. Absolutely.

* * * * *

We have a form of receipt, which was furnished by our company, where a policy is left for in-

spection only. That means when there has been no settlement. If you take out a million dollars worth of life insurance you would not get a receipt for the first premium, the policy is the receipt for the first premium; for every subsequent premium you get a regular company receipt.

Q. I mean a receipt for the policy.

A. Where a policy is left with an applicant and he has not made any settlement on that, the company wants to be protected. It is supposed then that that policy should be left with the applicant with the receipt signed, 'I hereby receive this policy and it is understood that no obligation is incurred by the company while this policy is in my possession until I pay the premium on same.'

Q. That yellow slip is to that effect, is it?

A. No, it has nothing to do with that at all. *Inasmuch as I had already paid the premium to the company on these policies, I had no hesitancy in giving them the policies. There was not any receipt for elimination of liability on the part of the company.*" (Tr. pp. 96-97.)

The policies were delivered to the beneficiaries, and on April 16, 1932, Steinfeld wrote Herbert Frey a letter (Pltf's. Exhibit 6, Tr. p. 177) in which he said:

"As you know, you have a receipt from the company for the full first year's premiums on these policies and I trust you will be able to secure for me the company's note for the total amount, so that we may then proceed to get some more insurance issued."

Mrs. Steventon placed the policies in the safe. They remained in the safe over a month. (Tr. pp. 103, 38.)

No letter was written; no request was made for their return. Then the following occurred, according to the testimony of Mrs. Steventon:

“Then one day I received a telephone call from Mr. Steinfeld. He first asked for my brother Herbert. He was in Los Angeles at the time. Then he asked for my son, John Steventon, but John was away. So then he spoke to me. He said, ‘Mrs. Steventon, will you do me a favor?’ I said, ‘Yes, what is it?’ He said, ‘Return those policies, I must have those policies for auditing purposes only, I will return them.’ I said, ‘I have no one to send them with.’ He said, ‘Can’t you get someone, I must have those policies.’ It was a Saturday morning, I think, and we were quite busy. I said, ‘All right, Mr. Steinfeld, I will do the best I can.’ I asked Mr. Straight to take the policies up to Mr. Steinfeld, he wants them for auditing purposes only. He said, ‘All right, I will do that.’ So I gave them to Mr. Straight and he took them to Mr. Steinfeld.”
(Tr. pp. 38-39.)

At this point it must be stated that appellant seeks to give this court an entirely erroneous and distorted version of the testimony. On page three of its brief it is stated, as if it were the uncontradicted testimony, that Steinfeld, when he telephoned to Mrs. Steventon, asked her “either to return the policies or pay the premium, as the company’s auditor would be in and he must have either the premium or the policies.” The suggestion is then given that Mrs. Steventon returned the policies for cancellation. Not only did Mrs. Steventon testify to the conversation that actually

occurred on her examination in chief, but expressly denied in rebuttal that Steinfeld had said anything about wanting the policies or the money. (Tr. p. 104.)

Mr. John Steventon testified as follows:

“About the 24th or 25th of May, 1932, I came back and my mother, Mrs. Steventon (the preceding witness), told me she had given up the policies to Mr. Steinfeld. I had several telephone conversations with Mr. Steinfeld in which I asked him why he had taken the policies from our organization without an O. K. from Mr. Frey or myself. He stated that he had taken them for auditing purposes and for me not to worry, we were covered with insurance, and he would have the policies back to us in a short time.” (Tr. p. 40.)

But Steinfeld had an application for \$55,000.00 insurance and the company had written but twenty. For some reason the company did not wish to write the policy for \$35,000.00 payable to the corporation, San Francisco Milling Company. Steinfeld, however, “told Herbert Frey, Walter Frey and Selma Steventon that we could accomplish the same thing by having policies issued to individuals and assigned to the company.” (Tr. p. 72.) Walter had his first physical examination on March 5, 1932, and more than sixty days having expired, a new physical examination was required for the issuance of additional policies. So, at Steinfeld’s request, on the first day of June, 1932, Walter went up to Dr. Allen for a second examination. He passed this examination, a certificate of good health was issued, and the issuance of the

additional policies was recommended. These policies were sent out from New York dated June 1, 1932, and arrived June 4, 1932. Walter died on the morning of June 4, 1932. Fully advised of the fact of death, Steinfeld delivered these policies to the beneficiaries. He did this, he testified, because he had promised that these policies would be in effect from June 1, 1932, and it was carrying out what was intended and what he had promised. "I had promised Herbert that I would pay the money for the premium into the company, but I didn't do it. (Tr. p. 70.) I promised Herbert that before sundown of the very day Walter came up for this examination the insurance would be put in force." (Tr. p. 74.) It is unnecessary to say more regarding these policies, inasmuch as the jury found thereon in favor of the defendant and the plaintiff has not appealed.

Appellant states that no demand was made for the return of the policies. This is not true. The policies were taken from Mrs. Steventon on or about May 24, 1932. (Tr. p. 104.) John Steventon testified that he was after Steinfeld daily for the return of the policies and was assured that the policies were in effect and would be returned shortly. (Tr. p. 40.) Walter Frey died on June 4th.

Appellant states that the policies were "cancelled." There is no plea of cancellation or rescission. The only defense is that the policies were never effective.

It is very remarkable indeed that the defendant, so careful to require a receipt expressly negating responsibility before a policy, not in effect, should go

into the hands of the insured or beneficiary, even for purposes of inspection, should permit these policies to remain in the possession of the plaintiffs over five weeks, from prior to April 15th to May 24th, without a receipt of any kind, without a single written communication or notification demanding their return or declaring the company's non-responsibility thereon. Particularly is this true, inasmuch as the company knew not only that the policy itself expressly acknowledged receipt of the premium, but that an additional receipt for the premium had been issued.

Steinfeld testified he gave defendant his checks dated *April 11, 1932*, for the net premium. He testified that he stopped payment on these checks, "two, three or four days" (Tr. p. 73) *after* he delivered the policies. The company had given Steinfeld a receipt in full on receipt of the checks. On *April 16, 1932, five days after* the date of the checks and *two days after* these checks in evidence (Tr. p. 200) had been returned from the bank (Tr. p. 73), Steinfeld wrote plaintiff's Exhibit 6, in which he stated to Herbert Frey:

"As you know, you have a receipt from the company for the full first year's premiums on these policies and I trust you will be able to secure for me the company's note for the total amount, so that we may then proceed to get some more insurance issued."

It is utterly impossible that Steinfeld could have written the letter of April 16th and not have regarded the premium as paid. He testified that it was paid. (Tr. p. 99.) Where is there any letter or noti-

fication whatsoever from Steinfeld or the company notifying insured or beneficiaries that payment of the premium had been stopped or nullified? Where is there any demand for the return of the policies or the receipt? Just what transpired between Steinfeld, the agent, and the company is not clear, but certain it is that either the company received Steinfeld's money or accepted his credit.

Mr. Murray, cashier for defendant in San Francisco, testified:

“When the company delivers policies to an agent, he is not personally charged with the premium, but it looks to the agent for payment. The company has nothing to do with the collection of the initial premium. We look to the agent. The company holds him personally responsible.” (Tr. p. 78.)

Steinfeld testified he delivered the policies, relying upon the responsibility of the beneficiaries to reimburse him. (Pltf's. Ex. 6, Tr. p. 102.) Such practice is customary. (Tr. p. 71.)

Appellant made a motion for a new trial, on the same grounds that are urged on this appeal, and the trial judge denied the motion.

Appellant in its brief makes three contentions:

(1) That the evidence does not support the finding that the premium was paid, and

(2) That there was no meeting of minds, delivery or acceptance of the policies.

(3) That the evidence does not support the finding that the premium was paid “during the insured's continuance in good health.”

We shall proceed to consider those contentions in the above order.

I. THE PAYMENT OF THE PREMIUM IS CONCLUSIVELY PROVED BY THE EVIDENCE IN THIS CASE.

There are several answers to appellant's contention, that the policies did not take effect because the premium was not paid.

A. THE PREMIUMS WERE ACTUALLY PAID.

When the company accepted Steinfeld's checks, it accepted them as payment. It evidenced this acceptance both by delivery of the policies and by an independent receipt in full. The policies and the receipt were given to Steinfeld for the very purpose of delivering them to the insured or beneficiaries. The receipt was not for the net amount paid by Steinfeld but for the full amount of the first year's premium. Steinfeld testified over and over again that he paid the premium, that the policies were in full effect and that payment of his checks was only stopped several days after he had actually delivered the policies to the beneficiaries. Steinfeld testified as follows:

"I gave the defendant my personal check for the premium on the two policies which are payable to Herbert E. Frey and Selma Steventon. I gave a check for the sixty per cent. I received a receipt in full. I brought the policies and the receipt to the San Francisco Milling Company and gave the policies and the fully paid receipt to Selma Steventon and Herbert Frey, the beneficiaries, with the words 'Here you are, here are your policies, here is a receipt from the company,

I paid the money, I didn't take any chances that the company might recall the policies on me, I have taken it upon myself to pay the premiums, here they are'." (Tr. pp. 72-73.)

* * * * *

"I handed them the policies folded up and in envelopes just as they were handed to me at the cashier's desk when I paid the premium." (Tr. p. 73.)

"Q. You delivered the policies and paid the premium; you must have thought they were effective then.

A. Absolutely.

Q. You wanted to find out whether they had come to any conclusion as to the payment?

A. Yes, giving me my compensation. If I had died while that money was in the hands of the company I would have had no recourse against the San Francisco Milling Company, or my estate would not, I didn't have a scrap of paper from them. That is all I was after that day.

Q. What was the amount of those checks?

A. The checks I gave the company in connection with the Walter Frey policy was about \$186; I paid the company 60 per cent of the net premium." (Tr. p. 96.)

* * * * *

"On April 16, 1932, I wrote a letter. I stated in that letter that the policies are in full force and effect, and that they had the policies fully paid, because I had paid for them." (Tr. p. 99.)

* * * * *

"Q. When you gave the insurance company the policies were paid, were they not,—the premium was paid?

A. I paid the money to the company.” (Tr. p. 100.)

That which was not paid was the amount owing by appellee to Steinfeld and for which credit had been extended in accordance with the agreement of the parties. When Steinfeld talked to plaintiff he was not attempting to secure payment on behalf of the company. As he said:

“I was down there to put myself in a better position than I was in. A check or a note would do it. A note was perfectly good from the San Francisco Milling Company.” (Tr. pp. 101-102.)

From the circumstances and testimony in this case the jury was amply justified in finding that the checks constituted payment. The intent to accept them as such was evidenced by delivery of the policies with the acknowledgment of payment therein, by the separate receipt in full and corroborated by the testimony of Steinfeld.

“It is a question for the trier of facts in every case whether a note given for the amount of a debt was accepted as payment, and upon appeal the verdict of the jury or the finding of the trial court is conclusive of this issue.”

20 *Cal. Juris.*, p. 928.

In *Martin v. New York Life Ins. Co.*, 3 N. M. 400, 234 Pac. 673, the court held at page 676:

“And the fact that the insurer, upon receipt of the personal check of the insured, issues and delivers its official receipt, by which it declares in writing that the premium such check is ten-

dered in payment of has been actually paid, so strongly indicates that it did receive such check as payment, that the burden would rest upon it to show otherwise. Such a rule necessarily arises from its written admissions contained in the receipt."

Obviously, if the issuance of a receipt, by an insurance company accepting a check, throws the burden of proof that it was not accepted as payment upon the insurer there is ample evidence to sustain the jury's verdict in this case. Not alone is that burden not sustained but there is no evidence in the record other than that the check was received in payment.

The initial premium is deemed to be paid whenever the net amount due the company after deduction of the agent's commission is paid. Thus in *New York Life Ins. Co. v. McCreery*, 60 F. (2d) 355, there was a provision requiring that the first premium be paid in cash and that the applicant receive a receipt and sign a certain declaration. The insured did not pay the premium in cash but gave the soliciting agent two promissory notes both in full amount of the premium. It is not disclosed what happened to the first note but the second note was discounted by the agent for some sum greater than the amount which the insurance company was entitled to receive from the soliciting agent, but less than the full amount of the premium. The declaration to be signed by the applicant was never signed and this provision of the application was accordingly not fulfilled. The questions on the appeal were stated by the court to be "(1)

Was the premium paid to the agent in cash; (2) were the requirements for the issuance of a receipt by the agent and the signing of a declaration by the applicant in the nature of conditions precedent to a contract of immediate insurance; and (3) if so, could the soliciting agent waive these conditions?" Appellant apparently cites this case for the proposition that under these circumstances no payment was made which would put the policy immediately in force. (Appellant's Brief, p. 26.) To the contrary, the court expressly held that when the agent discounted the note and secured an amount *equal to the amount the company was entitled to receive* this was payment *in cash* of the premium. The judgment for plaintiff was reversed on the entirely different ground that the failure to sign the declaration required by the application was the breach of a condition precedent which prevented the insurance going into effect.

See, also, *Courdway v. Peoples Mutual Life Ins. Co.*, 118 Cal. App. 530; 5 P. (2d) 453, holding that where the full net premium to the company is paid by the agent there is no question of payment as between the insurer and the insured.

Furthermore, the jury was particularly justified in finding that the checks constituted payment as to the plaintiff and his assignors. In fact, the company would probably be estopped as against the plaintiff in this action to claim otherwise. The receipt in full, together with the policies, was delivered to the agent with the knowledge and intent that it should be by him transferred and delivered to the benefi-

ciaries as evidence of payment and be regarded and acted upon by them as such. It placed in the possession of the agent the means of giving the beneficiaries positive assurance that the premium had been paid. The particular modes and methods of payment as between the company and its agent were unknown to the beneficiaries and did not concern them. The company may have been indebted to the agent, it may have extended credit to the agent, it may have received money or value of any kind satisfactory to itself. As a matter of fact, all that Steinfeld told the beneficiaries was that he had himself paid the premium. Whatever rights the company might have had against its agent, from whom it accepted the checks, it is estopped as against the beneficiaries, those for whose very benefit and satisfaction the receipt was uttered, to contend that it did not constitute payment.

Most certainly the insured and beneficiaries were entitled to rely upon the company's receipt, given in full for their benefit, as conclusive evidence of payment, particularly when accompanied by the express declaration of the agent to that effect. They did rely upon the receipt and as to them the matter of payment was reduced to a satisfactory arrangement between Steinfeld and themselves. The situation would not have been different if the treasurer of defendant had stood by and said: "Don't worry; you are protected; the premium has been paid." As between Steinfeld and the company, the question of whether or not acceptance of the checks constituted payment was one of intent, but as against the plaintiff in this action, the company is estopped to dispute that intent.

The insurance company could not lull the insured and beneficiaries into security, and then defeat their claim on the basis of some undisclosed arrangements between the agent and itself. The "agent" in this case was not moreover, an outside agent, but had for twenty years been a part of the company's organization. There is no difference between the receipt in full given for the premium in this case, and the receipt contained in the contract of sale in *American Nat. Bank v. Sommerville*, 191 Cal. 364, 372-373. In that case the court said, "It is an application of the fundamental, equitable, and moral rule that a man may not be permitted to deny the truthfulness of an assurance which he has given to another for the purpose of having it acted upon by the latter, and which the latter has acted upon." See also concurring opinion of Judge Shaw in *Flood v. Petry*, 165 Cal. 309, 318. An equitable estoppel prevents defendant from disproving the fact of payment as against the plaintiff. (*Dolbeer v. Livingston*, 100 Cal. 617; *People v. Armsby Co.*, 111 Cal. 159; *Irrigated Valleys Land Co. v. Altman*, 57 C. A. 413.) The principle is particularly applicable in this case, as it is undisputed that the defendant did nothing whatsoever to place the insured or beneficiaries upon notice that they could not rely upon the receipt, that payment had not been made as indicated, or that the policies would be ineffective without payment.

Not a single notice or demand was ever sent or given. After over five weeks, Steinfeld obtained possession of the policies by trick, but he at no time told the insured or beneficiaries that payment had been

made by checks that had been stopped, or that the receipt was ineffective. Plaintiff and his assignors were permitted to remain in utter ignorance of any facts that would dispute payment in full as indicated by the receipt until after this action was brought. A finding by the jury that the checks constituted payment was not only amply supported by the evidence so as to be binding upon an appellate tribunal, but was in fact the only reasonable, logical and fair conclusion that could be arrived at.

B. THE RECITAL AND ACKNOWLEDGMENT IN THE POLICIES IS CONCLUSIVE.

Each policy contains the following acknowledgment of payment:

“This policy is issued in consideration of the application and of the payment of the first premium of one hundred fifty-two and 21/100 dollars (\$152.21) receipt of which is hereby acknowledged.”

Section 2598 of the Civil Code of California is as follows:

“Evidence of Payment of Premium—An acknowledgment in a policy of the receipt of premium is conclusive evidence of its payment so far as to make the policy binding, notwithstanding any stipulation therein that it shall not be binding until the premium is actually paid.”

Conclusive evidence is defined by Section 1837 of the Code of Civil Procedure of the State of California, as follows:

“Conclusive or Indisputable. Conclusive or unanswerable evidence is that which the law does

not permit to be contradicted. For example, the record of a court of competent jurisdiction cannot be contradicted by the parties to it.”

The code section is as definite, pertinent and applicable as can be imagined. While appellant recognizes the fact that the section is binding on federal and state courts alike, and merely seeks to avoid its applicability to the present case by arguments that are neither sound nor clear, we will refer briefly to the authorities compelling this result.

Where a state legislature has by statute modified the principles of general commercial law, the federal courts will recognize such modification and to the extent that such legislation modifies the law merchant the federal courts will follow the highest court of the state in its interpretation of such modified legislation. (*Peterson v. Metropolitan Life Ins. Co.*, 19 F. (2d) 74; *Smith v. Nelson Land and Cattle Co.*, 212 Fed. 56.)

A party cannot be deprived of a statutory right to which he is entitled in an action in a state court upon removing the action to a federal court. (*Texas & Pacific Ry. v. Humble*, 181 U. S. 57; 21 S. Ct. 526; *Great Southern Life Ins. Co. v. Burwell*, 12 F. (2d) 244.) This is particularly true where the statute prescribes a rule of evidence as in the present case. It will be noted that Section 2598 of the Civil Code is a provision for what shall be deemed to be conclusive evidence of payment of the premium. Under such circumstances federal courts are bound to apply the statute even though it might result in a different

effect than if the common law rule were applied. In *Pure Oil Pipe Line Co. v. Ross*, 51 F. (2d) 925, the court said:

“It is well settled that section 725, supra, requires the national courts in the trial of civil cases at common law to observe as rules of decision when not within the exceptions named, the rules of evidence prescribed by the statutes of the states in which such national courts are held. *Connecticut M. Life I. Co. v. Union Trust Co.*, 112 U. S. 250, 5 S. Ct. 119, 28 L. Ed. 708; *Turner Simplicity Mfg. Co. v. Brenner* (C. C. A. 8), 40 F. (2d) 368, 370; and cases cited in note 81, sec. 725, Title 28, U. S. C. A.”

See also:

Standard Oil Co. v. Cates, 28 F. (2d) 718;

Franklin Sugar Refining Co. v. Luray, 6 F. (2d) 218,

and the recent decision of this honorable court in

New York Life Ins. Co. v. Gist, 63 F. (2d) 732,

relating to this particular code section.

These policies were delivered into the possession of the beneficiaries. If there could be such a thing as a conditional delivery, such was not intended in this instance. The policies were delivered and received as effective instruments. They were retained by the beneficiaries until taken from them under circumstances by which their possession and rights cannot be prejudiced. The proof of the contents by copies from files of appellant, was the equivalent of the production and introduction of the originals by the respondent.

In the face of this provision in the policies it does not lie in the mouth of appellant to dispute that the policies are binding upon it, because it did not receive the premium. The code section is so plain as not to be open to construction. The cases do not construe it; they apply it. The facts and circumstances may vary, but the acknowledgment of receipt of the premium in the delivered policy is in itself conclusive of its payment, in so far as to make the policy effective.

Appellant asserts that it never has been held in California that such an admission in the policy prevails over an unperformed condition precedent. It is so obvious from the language of the statute that it applies to conditions precedent that appellant's contention has probably never been made in the cases. Whether or not the clauses in some of the cases were in the nature of a condition precedent or not is not clear as they are rarely set out. The courts of the State of California have uniformly applied Section 2598 to every case in which the rights of the policy holders are attacked on the claim that the premium was not in fact paid where there is an acknowledgment of receipt in the policy. The assumption that the section applies to conditions precedent is apparent in the case of *Palmer v. Continental Insurance Co.*, 132 Cal. 68, and the decision of the lower court in 61 Pac. 784. There a note given in payment of the premium contained an express provision that the insurer should not be liable for any loss or damage that might occur while any note or obligation given for the premium remained unpaid. There was a de-

fault in the payment of the note given as a premium. The lower court held that the code section applied *only* so far as the original binding effect of the policy was concerned, in other words to condition precedents, and did not prevent a forfeiture by reason of the subsequent failure to pay the note. As pointed out by the lower court, the insurer was not claiming that the premium had not been paid but was relying upon the agreement contained in the note given for the premium. The California Supreme Court in reversing the decision of the lower court held:

“Section 2598 is sufficiently comprehensive to include as many stipulations therein referred to, and as many different forms of such stipulation, as the insurer may express in its policy. By inserting in the section the phrase, ‘notwithstanding any stipulation therein’, the legislature intended to prevent the insurer in any action upon the policy from disputing its acknowledgment that it had received the payment. The section is not limited to a policy which contains a provision in specific language that it shall not be binding unless the premium has been ‘actually paid’, but extends to any stipulation which is intended to have that effect.”

Certainly if appellant is not attempting to avoid the binding effect of the policy based upon a stipulation that it should not be binding until the premium was actually paid, then its entire argument is meaningless. Appellant’s apparent theory is that a stipulation that a policy shall not be binding until the premium is paid is something different than a condition precedent. This contention is not sound. As

was recently said in *Hurt v. New York Life Ins., C. C. A. 10th, 51 F. (2d) 936*, with reference to a similar provision contained in a policy of insurance and the application therefor:

“In the law of contracts, a condition precedent may be either a condition which must be performed *before the agreement of the parties shall become a binding contract* (13 C. J. p. 564, #532), or a condition which must be fulfilled before the duty to perform a provision of an existing contract arises. *Elson v. Jones*, 42 Idaho, 349, 245 P. 95, 96; *Lynch v. Stebbins*, 127 Me. 203, 142 A. 735; *Fox v. Buckingham*, 228 Ky. 176, 14 S. W. (2d) 421, 423; *Wells v. Smith*, 2 Edw. Ch. (N. Y.) 78, 13 C. J. p. 564, #532; *Cavanagh v. Iowa Beer Co.*, 136 Iowa 236, 113 N. W. 856.” (Emphasis supplied.)

Thus it is immaterial which form of condition precedent appellant argues that this clause constitutes. If it is contended that it is a condition to be performed before the agreement of the parties shall become a binding contract, it is practically in the language of the code. If it is a condition which must be fulfilled before the duty to perform a provision of an existing contract arises, then it is squarely within the rule of the California Supreme Court decision in *Palmer v. Continental Insurance Co.*, supra. The following cases which have been referred to by appellant apply the statutory provision to various situations in all of which the acknowledgment in the policy was held to be conclusive. (*Farnum v. Phoenix Ins. Co.*, 83 Cal. 246; *Griffith v. Life Insurance Co.*, 101 Cal. 627; *Masson v. New England M. L. Ins. Co.*,

85 Cal. App. 633; *Courdway v. Peoples Mut. Life Ins. Co.*, 118 Cal. App. 530.) Appellant is unable to cite authority of any California court remotely indicating that Section 2598 does not apply to conditions precedent. Thus the following cases cited by appellant do not consider the question of payment of premium or Section 2598 of the Civil Code or any similar code section.

Sharman v. Continental Ins. Co., 167 Cal. 117;

Iverson v. Metropolitan Life Ins. Co., 151 Cal. 746;

Toth v. Metropolitan Life Ins. Co., 123 Cal. App. 185.

Obviously none of the California cases dealing with Section 2598 can be used as authority for appellant's contention because each held that Section 2598 was conclusive evidence of payment under the circumstances. Appellant relies wholly upon the recent decision of this honorable court in *New York Life Ins. Co. v. Gist*, supra, in support of its contention that the acknowledgment in the policy does not control, although the question was not there involved and the language of this court is square authority for appellee's position. The question before the court was not whether the recital in the policy was conclusive evidence of its payment *as a delivered policy* but rather *when* the recital became conclusive. The court quite properly held that the acknowledgment of payment did not become conclusive until the delivery of the policy which occurred subsequent to the time at which another provision of the policy had been breached. The condition precedent which was there

held to bar recovery was the condition that the insurance should not take effect if the insured had consulted or been treated by a physician between the time of the application and the delivery of the policy. This court merely held against a contention that the policy was constructively delivered prior to the violation by the insured of the above provision. With reference to Section 2598, it was held that the statute entered into the contract and was evidently "directed to the situation where the premium is taken care of by a note or some other credit arrangement, so that the premium has not been paid in the literal sense, since the company has not received the money therefor." This is precisely the situation disclosed by the evidence in this case.

We consider that our preceding argument demonstrated conclusively that the premium was in fact paid to the appellant prior to the delivery of the policies. Certainly it cannot be questioned that the policies were delivered to the beneficiaries and accepted by them upon the assurance that the premium had been paid, as evidenced both by the receipt in the policies and the separate receipt issued. They were accepted and retained by the beneficiaries under a credit arrangement with the agent, which is precisely the circumstance under which this honorable court stated in the *Gist* case that:

"This statute prevents the insurance company from taking advantage of the provision in the policy that it shall not become effective until the premium is actually paid, as has sometimes been attempted in such cases."

C. COMPANY BOUND BY ACCEPTING RESPONSIBILITY OF AGENT.

It is the established law that where an agent is held responsible if he delivers a policy without receiving the premium and he delivers the policy and trusts to the insured, the company will be bound. The very cases cited by appellant for the theory that the agent cannot waive this provision of the policy recognize this rule and carefully distinguish the case presented from the situation where an agent is held responsible.

Thus in *Curtis v. Prudential Ins. Co. of America*, 55 F. (2d) 97, the court stated:

“There is no evidence whatever that the officials of the company had any notice that the local agent was collecting weekly installments from the insured, or that the agent remitted same or any part thereof to the company. Had there been any such evidence, and had the company had notice of the situation as it actually was, an entirely different case would be presented for our consideration.”

Here the company did know that the agent had given his personal check for the net amount of the premium to the company and that that check had been accepted in payment of the premium and the policy was actually delivered to the insured.

In *Aetna Life Ins. Co. v. Johnson*, 13 F. (2d) 824, the policy required actual payment of the first premium. The soliciting agent of the insurance company delivered the policy under an oral arrangement for the payment of the premium to him. The court held that the payment of the first premium was a

condition precedent to the policy going into effect. The decision of the court shows clearly, however, that on the evidence here presented the court would have found that the agent was authorized to accept this form of payment of the policy, that is, by an oral extension of credit on the part of the agent to the insured. The court recognized in line with the cases of *Miller v. Life Insurance Co.*, 12 Wall. 285, 20 L. Ed. 398; *Smith v. Provident Sav. Life Assur. Soc.*, 76 F. 765, 13 C. C. A. 284, and *Fidelity and Casualty Co. v. Willey*, 80 F. 497, 25 C. C. A. 593, that if the insurer held the agent responsible for the premiums and charged the amount of this particular premium to his account this practice would authorize the agent to deliver the policy. The court stated as follows:

“We are unable to find in the agency contract in this case with Blewett & Severn, or in the instructions given them by the insurer, any grant of authority to extend credit for the amount of first premiums received. There is no evidence of any practice by the agents of the insurer to give such credit. Nor do we find that the insurer charged to the agents the amount of premiums on policies sent to them for delivery, or held them personally responsible for the premiums. By the terms of the contract between the manager and Blewett & Severn, the agents were to be credited with every application for new insurance, and were responsible to the manager for all policies and papers delivered to them, and agreed to hold all money collected for premiums as a trust fund. No evidence was given to show the state of accounts between Blewett & Severn

and the company, or the manager, or to show that premiums were charged to agents when policies were forwarded for delivery, or at any other time.”

The custom of the appellant in this case is shown by the following testimony of Gerald W. Murray, its agency cashier.

“When the company delivers policies to an agent, he is not personally charged with the premium, but it looks to the agent for the payment. The company has nothing to do with the collection of the initial premium. We look to the agent. The company holds him personally responsible.” (Tr. p. 78.)

That credit was extended to the agent on these particular policies is shown conclusively by the fact that the company took the agent’s checks in payment of the policies. The mere fact that the agent subsequently stopped payment on the check cannot affect this extension of credit.

In *Smith v. Provident Sav. Life Assur. Soc. of New York*, 65 Fed. 765 (C. C. A. 6th Cir.), the court said:

“The provision in the contract of agency between a life insurance company and a general agent that ‘agents crediting * * * premiums not actually received do so at their own risk, and must look to the policy holder for reimbursement. The society does not ask or desire you to take this risk,’—is evidence that the company was aware of the practice of its agents to give credit, and, in connection with evidence of the agent’s practice of giving credit on the first premium,

shows a greater actual authority than is implied from the provision of the policy that it shall not take effect unless the premium is actually paid, so that a delivery by the agent of a policy without receiving payment would constitute a waiver of any such provision. * * *

In view of the provision in a contract of agency with a life insurance company that agents crediting premiums not actually received do so at their own risk, a provision expressly withholding from the agent authority to give credit will be interpreted to mean credit for the company.”

II. CONTENTION THAT THERE WAS NO MEETING OF MINDS; NOR WAS THERE DELIVERY OR ACCEPTANCE OF THE POLICIES.

Under this heading appellant gives a few fragmentary and segregated excerpts from the record that do not give an accurate picture. Without burdening the court with repetition, appellee's statement of facts will disclose the true situation. In the absence of evidence to the contrary, the intention of the agent to make delivery will be presumed from manual tradition. *Smith v. Provident Mutual Life Assurance Society*, 65 Fed. 771.

Appellant argues that the policies did not go into effect because Walter Frey had not signed "slips" sent out by the assistant secretary and registrar of defendant and addressed to the "Manager of the San Francisco Office" and which requested that the policies be not delivered or premium accepted until an appended form of acceptance had been signed by the

insured. These slips were frequently referred to during the trial as "yellow slips."

There is absolutely nothing in the policy or application making the execution of any such receipt a condition to the policy becoming effective. There is absolutely nothing to place the insured or beneficiaries upon notice that any such receipt would be requisite.

"In sending a policy to an agent in this state for delivery with instructions as to what to require, the instructions will not be binding upon the beneficiary in the policy unless the beneficiary or the insured had knowledge of the conditions contained in the instructions to the agent."

Mutual Life Insurance Company v. Vaughan,
125 Miss. 369, 88 Southern 11.

The very idea that disregard by an agent of such an inter-office communication could nullify a policy which had been delivered is absurd upon its face. Regarding these slips, Steinfeld testified:

"On April 16, 1932, I wrote a letter. I stated in that letter that the policies are in full force and effect, and that they had the policies fully paid, because I had paid for them. * * * They were paid for. That portion of the transaction which was not completed was the signing of that exhibit, whatever the number is. Whether that is a legal point, or whether the insurance is in force, I am not a lawyer and I cannot say. The yellow slip is an instruction to the agent.

Q. Look at it and see if it is not addressed to the manager. Were you the manager of the company?

A. No, I was not.

Q. Then it was not addressed to you at all, it was addressed to the manager of the company, wasn't it?

A. That is correct; that is what it says there, yes." (Tr. pp. 99-100.)

The testimony is undisputed that the "slips" were never called to the attention of the insured or beneficiaries. They neither saw them nor were they asked to sign them. (Tr. p. 104.) Steinfeld testified:

"I positively do not remember whether I did or did not ask them to sign any such paper as Exhibit J; but the chances are I called their attention to the fact. I have a recollection that I called their attention to them. If I didn't I would have lost my job. They were very immaterial, these papers. The most important was the checks. I handed them the policies folded up and in envelopes just as they were handed to me at the cashier's desk when I paid the premium." (Tr. p. 73.)

It would, indeed, be a sham and a fraud if the law were as Mr. Murray, defendant's cashier, would construe it:

"Q. Do you mean to say that if the company received its premium and retains its premium and the insured receives the policy and retains the policy that that policy is not in effect unless the insured has signed the yellow slip?

A. Yes." (Tr. p. 79.)

As a matter of fact, the testimony is almost conclusive that there were no such slips delivered with these policies. There is no testimony that slips, of

which Exhibit "J" is a sample, were delivered with the policy. The testimony of defendant's witness Gerald W. Murray was that the "originals" of defendant's Exhibit "J" accompanied *these* policies when they were given to Mr. Steinfeld. This was on direct examination and from the evidence it was clear that Mr. Murray was under the impression that defendant's Exhibit "J" pertained to the policies delivered. On cross-examination it developed through this same witness' testimony that defendant's Exhibit "J" had reference to an earlier set of policies which were returned to the company. (Tr. p. 78.) Whatever claim appellant might make as to the necessity of signing a proper form similar to Exhibit "J" *pertaining to the policies delivered* it certainly cannot contend that before the policies should take effect the insured should acknowledge his acceptance of some *other* policies which were *not* delivered to him and were not intended by anyone to be in effect.

Appellant refers to a colloquy between the court and Steinfeld. If appellant seeks to intimate that the court was impressed by the "colloquy", it fails, for motions for directed verdict and new trial were alike denied. Appellant repeats at this point that no request was made for the return of the policies after they were taken by Steinfeld. Mr. Steventon testified that he was daily, during the brief interval that elapsed between the date the policies were re-taken and the death of Walter Frey (May 24-June 4), after Steinfeld to return the policies and was given the assurance: "That the policies were in effect, that

they were covered, not to worry and that they would be returned shortly.”

Appellant argues that the first policies were “surrendered” and that those issued under date of June 1, 1932, were substitutes. Appellant failed to impress either court or jury with this theory. It should be mentioned, moreover, that there is no defense of surrender or cancellation—the only defense is that the policies never went into effect. It should also be mentioned that if appellant’s theory were correct, that the policies of June 1, 1932, were substitutes for those of March 4, 1932, appellant has no complaint to make for either the earlier or the later would have been in effect and the jury only found for the plaintiff for \$20,000.00. It should also be noted that when the company sent out the policies with the aviation rider annexed and which were to replace the first two policies written, the new policies with the aviation rider were dated March 8, 1932, the same date as the policies they replaced. The policies issued after Walter’s second examination are dated June 1, 1932. They were not replacement policies, but new policies. The testimony is undisputed that when Steinfeld requested the second physical examination he did not indicate that it had anything to do with the policies issued under date of March 8, 1932. (Tr. p. 40.)

In any event, there can be no question that a substantial part, if not all, of the evidence showed delivery of the policies. Under those circumstances the verdict of the jury is conclusive in this respect.

In *Inter-Southern Life Insurance Co. v. McElroy*, 38 F. (2d) 557, the court said:

“It is earnestly urged on behalf of the defendant that there was never an actual delivery of the policy, but that, as delivered, it was incomplete, and that it was the intention of the parties that it should be returned for correction or amendment. Under the testimony, the details of which we need not relate, the question as to whether or not there was an actual delivery of the policy and an acceptance of it by the insured was a question of fact to be determined by the jury on proper instructions by the court, and the verdict of the jury is conclusive on this question. We must assume that the jury, under the instructions of the court, found that the policy was delivered to and accepted by the insured.”

III. DELIVERY OF POLICIES DURING INSURED'S “CONTINUANCE IN GOOD HEALTH”.

Appellant's third point is that the evidence does not support the finding that the policies were delivered during the insured's “continuance in good health.” Appellant is asking this court to pass upon the weight of the evidence and set aside the implied finding of the jury despite the facts,

first, that the question was submitted to and passed upon by the jury under full and proper instructions (as a matter of fact, the instructions were too favorable to appellant as we shall presently show);

second, that a motion for a directed verdict was made on this ground before the trial judge, who heard the testimony and observed the witnesses, and was denied;

and *third*, that a motion for a new trial was made before the trial judge upon the same ground and was denied.

To indicate how definitely and fully the issue was presented to the jury, we quote the following from the instruction (p. 109):

“Under the provisions of these policies which are before you, with respect to the condition that none of them shall be effective until and unless the policies respectively be delivered and the premiums paid during the continuance in sound health of (106) Walter E. Frey, you are instructed that such provision is a condition precedent to the taking effect of the policy. The effect of these provisions is to make it a condition that the policy shall not take effect or become valid and binding unless the insured was in fact in sound health at the time the policies were delivered (if you find they were delivered). In this aspect the defendant’s objection is not made to depend upon fraud or misrepresentation, but upon the fact as to whether or not the applicant’s health was good or otherwise. The inquiry then becomes an inquiry as to that fact, and does not depend upon the applicant’s knowledge or belief. In other words, it is not claimed that the deceased or his beneficiaries were guilty of any fraud or misrepresentation. The question in this connection for you to decide is whether the deceased was in good health at the time of the delivery of the policies. He was not in good health on June 4th when the last of these policies were actually delivered, for at that time he was dead. Was it the intention of the parties that the poli-

cies should be deemed delivered when they were executed and mailed in New York June 1st and was the deceased in good health at that time.”

We have stated that the instructions were too favorable to the appellant on the question of delivery of the policies during the insured’s “continuance in good health.” The general rule of the state courts is that a provision requiring delivery of the policy while the insured is in good health is a relative term requiring only the same condition of health as at the time of application. This is the rule in New York, where the home office of the appellant is located, and in many other jurisdictions. As was said in *Chinery v. Metropolitan Life Ins. Co.*, 182 N. Y. S. 555, with reference to a clause providing that “no obligation is assumed by the company prior to the date hereof nor unless on said date the insured is alive and in sound health”:

“Where a policy contains the provisions referred to and the company has had a medical examination prior to accepting the risk, the provision that the insured must be in sound health upon the date of the policy merely means that he has not become ill between the time of making his application and the time of the issuance of the policy. It ‘has no application to such chronic diseases as the insured may have had at the time of his application and medical examination’. *Webster v. Columbian Nat. Life Ins. Co.*, 131 App. Div. 837, at 842, 116 N. Y. Supp. 404, 408.”

See also *Mid-Continent Life Ins. Co. v. House*, 10 P. (2d) 718; *Priest v. Kansas City Life Ins. Co.*, 227

Pac. 548; and the cases cited therein; also, 1 *Cooley's Briefs on Insurance*, 2d Edition, page 653.

We concede that where delivery is required to be made while the insured is in good health the federal court rule is contrary to these decisions. The result of this situation is that although mutual life insurance companies are operated for the mutual benefit of policyholders and theoretically the same rights should be given to every policyholder paying the same premium, the actual effect of this difference in the rule is to make the rights of the policyholder in this connection depend upon the availability of the state or federal court for trial of the action. Bearing this in mind, the only inference that can be drawn from the inclusion in this application of the term "continuance in good health" rather than the absolute requirement of good health is that it conforms the result in either the federal or state court by express provision of the contract. In other words, unless the word "continuance" be wholly ignored the meaning of the requirement in this application is simply a statement of the rule of the state courts as set out in the *Chinery* case.

We do not find where such a clause has been construed by the federal courts. It has been passed upon by state courts and the reasoning of those cases is so convincing that we have no doubt it will be accepted by this court. In *Mutual Life Insurance Co. of New York v. Hoffman*, 133 N. E. 405, the court said:

"The provision that unless the first premium shall have been paid and the policy shall have

been delivered to the applicant during his 'continuance in good health' implies that the applicant was in good health when the application was made. Whether the insurance company issued a policy depended upon the statements contained in the application and in the medical examination, the clause in question has no reference to any unsoundness of health at the time of or previous to the application and medical examination. It refers solely to a change in the condition of health after the making of the application and medical examination, and when it is not shown that the alleged unsoundness of health did not occur between the date of the application and medical examination and the delivery of the policy, the insurance company must rely on the statements in the application and medical statement to avoid a recovery on the policy, and not upon the clause in question."

In *Fidelity Mut. Life Ins. Co. v. Elmore*, 71 So. 305, the court said:

"The phrase 'continued good health' can mean only that the insured having stated that he was in good health when he applied for the insurance, the company would not be bound to deliver the policy, if this state of good health had changed to a state of bad health, even though the application had been approved, the policy signed by the officers of the company and delivered to its agents for delivery to the insured. 'Continued good health' is a relative term and manifestly relates to the insured's statement of his condition when he signed the application. This is the letter of the document prepared by the insurance com-

pany, and its own carefully prepared documents will be construed most strongly against it.”

Of course, under the pleadings and evidence in this case there can be no claim made by appellant that the insured's condition of health changed between the date of the application and the date of delivery of the policy since appellant's claim is that the condition which it claims to have proved and which it describes as inconsistent with good health is claimed to have existed prior to the date of the application. However, we will consider the evidence in sufficient detail to show that the insured was in fact in good health at the time the policies were delivered. Before doing so we desire to point out that, to use the language of the court in *Mid-Continent Life Ins. Co. v. House*, supra:

“ “ “The phrase, ‘good health,’ as used in its common and ordinary sense by a person speaking of his own condition, undoubtedly implies a state of health unimpaired by any serious malady of which the person himself is conscious. He does not mean that he has no latent disease of which he is wholly unconscious. If by the phrase ‘good health’ an insurance company desires to exclude every disease, though latent and unknown, it must do so by distinct and unmistakable language.” ’ ’ ”

As said by this honorable court in *Northwestern Mut. Life Ins. Co. v. Wiggins*, 15 F. (2d) 646:

“ ‘Good health,’ ‘illness,’ and ‘disease’ must be considered, in an application for insurance, not in the light of scientific technical definitions, but in the light of the insured's understanding in

connection with which the terms are employed in the examination.”

Bearing this in mind, we will now review the evidence in order that a true picture of the testimony upon which the jury based its verdict may be presented.

Dr. Herbert W. Allen testified twice, once for plaintiff and once for defendant. He had been a practicing physician for thirty years and in the employ of defendant for over twenty years. He testified to a personal recollection of his examination of Walter Frey. He examined him first on March 4, 1932, and again on June 1, 1932. “I made such an examination on or about March 4, 1932. As far as my examination of Walter E. Frey went, I found no evidence of disease. I found him to be in a normal condition of health and so reported to the defendant. On or about June 1, 1932, I again examined Walter E. Frey in a less extensive manner. I examined his heart and I found nothing abnormal that I could detect, which I reported to defendant.”

Dr. Allen further testified that he made a special examination of the heart. He examined the palpable arteries to detect any evidence of sclerosis. He examined the size of the heart. He used three methods for this purpose,—the location of the apex beat, percussion, and the stethoscope. “I applied those three methods in this instance, and according to the examination made, to the best of my ability, I found Walter Frey’s heart to be normal. I listened to ascertain

whether there were any murmurs and found no evidence. I took his blood pressure. I do not recall what the figures were. If there was anything abnormal about it, I would have called it to the attention of the defendant.”

We then have the examination of appellant’s skilled physician at approximately the time the policies were issued, and another examination approximately three months thereafter. Upon both examinations we find the heart to be normal in size, functioning normally, and without evidence of disease. This is certainly evidence of the most persuasive character.

Dr. Adolphus Berger, of the Coroner’s office, testified as to the results of his *post mortem* examination. He testified:

“I determined to my satisfaction the cause of death, which I recorded as acute dilation of the heart, chronic myocarditis, and coronary sclerosis with occlusion, the latter being the immediate cause.”

Let us briefly analyze this finding. A coronary occlusion occurs when a clot obstructs the vessel and stops the flow of blood. That is a condition which occurs in most cases of sudden death, and precedes death by a matter of seconds or minutes. Therefore Dr. Berger testified: “I saw no evidence by its closure that it had caused any acute or very immediate disease. I concluded that the individual had died so quickly that no acute disease as the result of the closure of that vessel could have formed.” The acute dilation of the heart occurs as a concomitant of death. The

heart relaxes, and does not contract. "It is correct to say that by acute dilatation of the heart I mean that the heart muscle had relaxed so that the heart at the time of death had expanded and did not contract."

Dr. Berger likewise testified that sclerosis "is not pathologically designated as a disease of the heart, but as a gradual, you might say, thickening or hardening of the vessels of the heart, which comes along with years."

"Q. In other words, what you found was not properly a disease of the heart, but a degeneration, a hardening of the vessels?

A. That part of it." (Tr. pp. 52-53.)

We have spoken of the coronary occlusion, sclerosis, and the acute dilatation. This leaves but the diagnosis of "chronic myocarditis". Myocarditis, he said, is an inflammation of the myocardium.* Dr. Berger gave his opinion that myocarditis existed, and called it chronic, but did not attempt to testify how long such a condition had existed. Dr. Berger also testified that, in his opinion, the heart was in life an enlarged heart. He did not weigh the heart and had nothing to guide him except his conclusion from the size of the relaxed heart after death. Dr. Berger did not make any microscopic examination of the heart and based his conclusion upon his gross examination.

Appellant contends that because Dr. Berger's examination was a post mortem examination his conclusions must be accepted as a matter of law and the opinions of examining physicians disregarded, and

*Dr. Kaufman fully explained the meaning and mis-use of this term.

without considering its possible distinctions from the present case cites in support of this contention the case of *Scharlach v. Pacific Mutual Life Ins. Co.*, 16 F. (2d) 245. In that case the evidence was undisputed that the insured was a very sick man at the time the policies were delivered. The disease was definite, malignant, pathological, of determinable duration within reasonable limits, and its presence at the time of death was undisputed. It was not a case of the conclusion of an autopsy surgeon from what he saw on gross examination of a heart as to the size and condition of that heart during life, as opposed to the findings of a skilled examining physician at the time the policy was issued. It was not a case of discovery of changes which are normal to age, which are not incompatible with normal functioning and good health, and which are not pathological. The same is true of the case of *Greenbaum v. Columbian Nat. Life Ins. Co.*, 62 F. (2d) 56. To illustrate the distinction and difference, and likewise the nature of sclerosis and myocarditis, we quote from the following cases:

Clarke v. New Amsterdam Casualty Co., 180
Cal. 76.

In that case the cause of death was given as acute myocarditis.

“The autopsy revealed a heart of more than normal size. The valves were thickened and covered with a calcereous deposit, which, according to the experts, would account for the murmur noticed just before the operation. * * * Great stress is laid by defendant’s counsel upon the

fact that at the post mortem examination the heart showed lime deposits. One of the defendant's expert witnesses, a physician, testified that 'the lime deposits in the heart were due to arterial sclerosis, which is frequently due to old age'. But there was no showing that this condition was pathological or that it was even unusual in a man of the age of the assured. Naturally a man of sixty or more would have less power to resist evil consequences resulting from an accident than a younger person would possess, but an insurer accepting as premiums money of a client of advanced years may not complain of that fact."

In *Equitable Life Assurance Society v. Gratiot*, 14 Pac. (2d) 438, 82 A. L. R. 1397, the court refers to the testimony in the case as follows:

"That such hardening (sclerosis) is not a disease, but a condition of the tissues developing gradually over a period of years. (p. 440.) That sclerosis of the arteries is common, and people that have it can live to a ripe old age even with an aneurysm." (p. 441.)

Before leaving the testimony of Dr. Berger, we wish to point out that the ability of an autopsy surgeon to accurately diagnose a condition of the heart from a gross examination of the heart after death is by no means absolute, and bears no analogy to his ability to discover a cancer or ulcer. This cannot better be demonstrated than by citing as an illustration the testimony of an autopsy surgeon from the same Coroner's office given before the same court, Judge Kerrigan presiding, on the 15th day of November,

1933, in the action of *Gussie Rubin v. Maryland Casualty Company*, action No. 19,512-K. The testimony in that case was transcribed and can be made available to this court. In that case Dr. Jesse L. Carr, of the Coroner's office of San Francisco, performed the autopsy. The decedent had met with sudden death, which the plaintiff claimed was the result of an accident, the automobile in which he was riding having gone over an embankment. The insurance company claimed that death was due to a preexisting condition and disease of the heart. Dr. Carr, after performing his autopsy, gave the cause of death as "coronary fibrous myocarditis with myocardial failure". This was Dr. Carr's gross examination. Fortunately, in that case slides were taken for microscopic examination. On the trial of the case Dr. Carr testified that his gross examination was entirely wrong and was proved to be such by the microscopic examination. The following is an extract from the testimony:

"Q. On page 1 of this report (written report of autopsy) which has been identified, you note the cause of death as chronic fibrous myocarditis with myocardial failure.

A. Yes.

Q. And on the same page you note in your histological (microscopic) examination that there is no fibrosis: Is that true?

A. Yes.

Q. Now, I will ask you if the finding of no fibrosis in the heart is not inconsistent with a cause of death of chronic fibrous myocarditis with myocardial failure?

A. Absolutely inconsistent.

largement of the heart by a physical examination. If such were not the fact, a physical examination would be useless.

“It is reasonable to expect that if a patient has a materially enlarged heart, for example one and one-half times normal size, that such a fact would be found by a physical examination, except there be a deformity of the chest wall of such a character that would make a physical examination not an average examination; for example, if the man instead of having the normal curvature of the chest—if he had the normal curvature of the chest then a heart which is one and one-half times the normal size could certainly be found by physical examination; otherwise physical examination would be useless if such a thing as that were not possible.” (Tr. p. 89.)

* * * * *

“If I were told that a patient was examined by a competent physician on March 4, 1932, and June 1, 1932, and found to have a normal sized heart, my opinion would be that it was normal. That opinion would not be changed by the findings of an autopsy surgeon after death, that the heart was one and one-half times normal size; because I have previously tried to explain to you that at death there is normally a dilatation of the heart as a concomitant of death, and therefore the enlargement of the heart that the autopsy surgeon found would, in the light of the two examinations by a competent physician previously, must therefore be interpreted as the normal dilatation that has occurred in that individual’s heart at the time of death.” (Tr. p. 90.)

* * * * *

“To the question whether it is possible for an autopsy surgeon finding an acutely dilated heart, to determine what was the size of that heart during life, my answer would be No.” (Tr. p. 88.)

Dr. Kaufman thereupon gave in detail the reasons that it is impossible for an autopsy surgeon to determine by inspection after death what the size of the heart was during life. (Tr. pp. 88-89.)

He also testified that absence of murmurs indicated that the heart was not dilated. (Tr. p. 91.)

Regarding the findings of Dr. Berger, Dr. Kaufman further testified:

“If an autopsy surgeon gave as the cause of death acute dilatation of the heart, chronic myocarditis, and coronary sclerosis, with occlusion, with no infarction present, I would infer the acute dilatation of the heart to be the result of death and not as the result of pre-existing disease; the chronic myocarditis to be the result of the coronary sclerosis. The cause of death would be the acute occlusion of the coronary vessels.” (Tr. p. 82.)

Chronic myocarditis, Dr. Kaufman explained, was a general, misleading and meaningless term, misapplied by the medical profession to describe a heart condition in association with a hardening of the arteries, and does not indicate that there was any preceding disease or inflamed condition of the heart muscle.

“Chronic myocarditis is in essence a misnomer; that is to say, it is a traditional term which has held up until today by reason of an unwilling-

ness on the part of the profession to change it. As a matter of fact, the termination 'itis' represents the Latin termination to indicate an inflammation of; for example, appendicitis, an inflammation of the appendix. Myocarditis does occur, that is, there are conditions in which a true myocarditis occurs. For example, in diphtheria, that is a true myocarditis. The term 'myocarditis' is used by the profession in describing a heart condition in association with a hardening of the arteries of the heart is a term which has remained in use although recognized by the profession as not in any way evidencing a preceding inflammation of the heart muscle. * * * All the authorities who write on the subject use the term 'myocarditis' with apologies." (Tr. p. 84.)

In other words, the description "chronic myocarditis" does not indicate that there was any preceding inflamed or diseased condition of the heart muscle.

Regarding sclerosis and myocarditis, Dr. Kaufman further testified:

"Coronary sclerosis is a condition, in the last analysis, of hardening of the coronary arteries of the heart. * * * As an actual fact, from the moment of birth until death there is a progressive deterioration and a series of progressive changes of degeneration which take place in all organs of the body, including the heart and the coronary vessels. From the age of six months on one can find in the arteries of an infant, even, evidence that sclerosis is beginning to occur. As a person lives long enough the sclerosis becomes more marked, until ultimately the sclerosis may develop to such an extent that at autopsy the coro-

nary arteries cannot be cut with a knife, and have to be cut with a scissors, since they are so markedly hardened—they are actually concrete pipes—lime pipes rather than concrete, they are pipes of lime; yet that person may function and the heart may function perfectly normally and allow them to carry on the normal every day occupation without any evidence of disease and yet at autopsy you find these changes. *As a corollary of those changes in the coronary arteries you find corresponding changes which are termed—incorrectly termed—myocarditis—also in proportion to the age of the individual and to the changes which have preceded in the coronary vessels.* The extent of these changes vary in different individuals, and these changes are constantly going on in all individuals, and if an autopsy were performed, irrespective of the cause of death, there would be found to one degree or another a certain amount of what I term coronary sclerosis or myocarditis. With one exception, so as to be accurate in the manner, there are isolated conditions or isolated cases, rather, in which there seems to be a predilection in the site in which these changes occur in the vessel. For example, in some cases the coronary vessels and the aorta may be relatively intact whereas the vessels of the brain may be markedly involved; or the vessels of the extremities may be markedly involved, or the superficial vessels may be markedly involved and yet the rest of the vessels of the body be only involved to a minor degree. Throughout the body changes of this character are constantly taking place to a greater or less degree throughout the whole of one's life."

Then Dr. Kaufman testified that from the findings of the autopsy surgeon the cause of the death in this case was acute occlusion.

“If an autopsy surgeon gave as the cause of death acute dilatation of the heart, chronic myocarditis, and coronary sclerosis, with occlusion, with no infarction present, I would infer the acute dilatation of the heart to be the result of death and not as the result of pre-existing disease; the chronic myocarditis to be the result of the coronary sclerosis. The cause of death would be the acute occlusion of the coronary vessels.” (Tr. p. 82.)

* * * * *

“In my opinion, given the findings of the autopsy surgeon, the cause of death in that case would be acute coronary occlusion; and, unfortunately, *I have seen it happen too often that a man in good health could suddenly die, and the same findings be disclosed on autopsy.*” (Tr. p. 90.)

* * * * *

“If that heart at the time of physical examination were negative with respect to murmurs, then it is good presumptive evidence that the heart at the time of the examination was not dilated, because one of the most important signs of a dilated heart is the evidence of murmurs. If in this particular case no murmurs were found at the time of the two examinations, it would be presumptive evidence against the dilatation existing at those times.” (Tr. p. 91.)

Dr. Kaufman testified that the pulse and blood pressure as found by Dr. Allen were normal.

In conjunction with all of the foregoing testimony, Dr. Kaufman was then asked the following questions:

“Q. If I told you, Doctor, that an autopsy surgeon found a heart acutely dilated in all chambers and filled with a dark fluid blood, the heart about one and one-half times its normal size, and there are scattered regions of fibrosis throughout; the coronary vessels of the left side indicate a marked thickening and in the descends branch about one and one-half inches from its origin there is a complete occlusion by virtue of marked sclerosis of the vessel. There is no acute infarction seen. The coronary vessels of the right side, although thickened to a moderate degree, are in no way comparable to those of the left side. There is some sclerosis at the aortic cusps. The cusps are not flexible. Do these findings necessarily indicate that the person examined was not in good health prior to the time of death?

A. No.

Q. They do not necessarily so indicate?

A. No.

Q. *I will ask you if the findings such as I have read to you and indicated to you are ordinary changes in a heart and vessels found in autopsy upon individuals forty years of age, and over?*

A. Yes; we can say that it is a rarity to find a person of forty years or over with coronary vessels that are intact. I think the figures given by Von Monkenberg are to the effect that at least 95 per cent. of persons over the age of 40 have coronary arterial hardening—sclerosis—and die of conditions other than due to coronary arterial occlusion or infarction. It is correct to say that such findings do not necessarily indicate that

the person examined was not in good health prior to the time of death. *According to my understanding, arteriosclerosis, or myocarditis, or both of these together, do not constitute a disease.*"

(Tr. pp. 85-86.)

It is clear, from the testimony of Dr. Kaufman, that as to the size of the heart, and as to its normal condition and functioning, he regarded the findings of Dr. Allen as more reliable than the conclusions of Dr. Berger. It is also clear that sclerosis and myocarditis do not constitute disease, but conditions normally to be found to a greater or less degree in individuals 40 years of age or over. It is also clear that such conditions, although found to be present upon autopsy, do not prevent the enjoyment of good health. The real cause of death, in Dr. Kaufman's opinion, was coronary occlusion, which was so recent as to leave no evidence of infarct.

Appellant segregates the one question in which the autopsy findings were quoted verbatim to Dr. Kaufman, and endeavors to dispose of his entire testimony on the ground that the word "necessarily" was used. Unfortunately for appellant, the testimony of the doctor cannot be brushed aside so lightly. Taking the question by itself, and eliminating all of the other testimony of the doctor, if the autopsy findings did not necessarily indicate that the person examined was not in good health prior to the time of death, then the jury was justified in believing, in accordance with the findings of Dr. Allen, that he was in good health prior to that time. But that question and answer do

not stand alone; they were followed up and combined with other questions, answers and testimony, which appellant would disregard, and in which Dr. Kaufman definitely and positively disposed of Dr. Berger's testimony and gave his conclusion, confirming the findings of Dr. Allen, that Walter Frey was in good health at the time of his examination.

Dr. Moody's testimony is merely to the effect that it is possible for an examining physician not to discover a true heart condition. This is true as well as it is true that an autopsy surgeon may be mistaken as to the true heart condition and particularly as to his conclusions regarding past history and duration.

Certainly this court is not going to say that the jury and the trial judge, who saw and heard the witnesses, did not have substantial evidence to support their conclusions.

Commencing at page 66 of its brief, appellant cites a line of authority upon which it apparently relies to convince this court that the testimony of Dr. Kaufman must, as a matter of law, be entirely rejected and the opinion of its own witnesses be deemed conclusive. These authorities may be grouped into two classes. First, those which emphasize the necessity of caution in accepting the testimony of a paid expert witness and, second, those which recognize that where the existence of a fact is being testified to the evidence of one who has witnessed the fact is to be preferred to that of an expert testifying in response to hypothetical questions. In the proper case these general rules of law are no doubt entitled to consid-

eration. They have no applicability to the present case, as we have previously pointed this out in our consideration of the case of *Scharlach v. Pacific Mut. Life Ins. Co.*, supra. The law with reference to this question of heart disease is well illustrated in the case of *Linn v. Terrell Compress & Warehouse Co.*, 142 So. (La.) 193, cited by appellant at page 72 of its brief. This case completely disposes of appellant's contention. There, as here, an autopsy was performed by the coroner who testified that the death was due to chronic myocarditis and acute dilatation. Expert testimony was then adduced on behalf of both parties as to the actual cause of death based upon the findings of the coroner. The testimony of the witness Dr. Duval that in his opinion the deceased died from infarction of the heart was accepted as against both the coroner's conclusion and corroborative testimony of an attendant physician, the court holding that the conclusion of Dr. Duval, who, like Dr. Kaufman, was a heart specialist of great experience, based upon the findings of the coroner, was not inconsistent with those findings and was to be preferred over the testimony of a general practitioner. Here Dr. Berger, who performed the autopsy, testified on behalf of defendant as to certain facts and also as to his conclusions from those facts. Under the rule of the cited case the jury was entitled to accept the conclusions of Dr. Kaufman construing the actual findings of Dr. Berger as against the opinion of either Dr. Berger or the other witnesses testifying on behalf of defendant.

CONCLUSION.

It is respectfully submitted that the contentions of appellant are not well taken; that the premium was actually paid and that appellant is estopped both by law and by fact to contend to the contrary; that the policies were delivered and accepted; and that the implied finding of the jury that the policies were delivered "during the insured's continuance in good health" is fully supported by the evidence.

The judgment should be affirmed.

Dated, San Francisco,

March 12, 1934.

Respectfully submitted,

NORMAN A. EISNER,

CARL R. SCHULZ,

Attorneys for Appellee.



United States
Circuit Court of Appeals

For the Ninth Circuit.

ETHLYN B. CLEMENTS, individually and as Administratrix of the estate of Ralph L. Clements, also known as R. L. Clements, deceased,
Appellant,

vs.

GEORGE W. COPPIN, as trustee in Bankruptcy of the estate of the Flintex Corporation, a corporation,
Appellee.

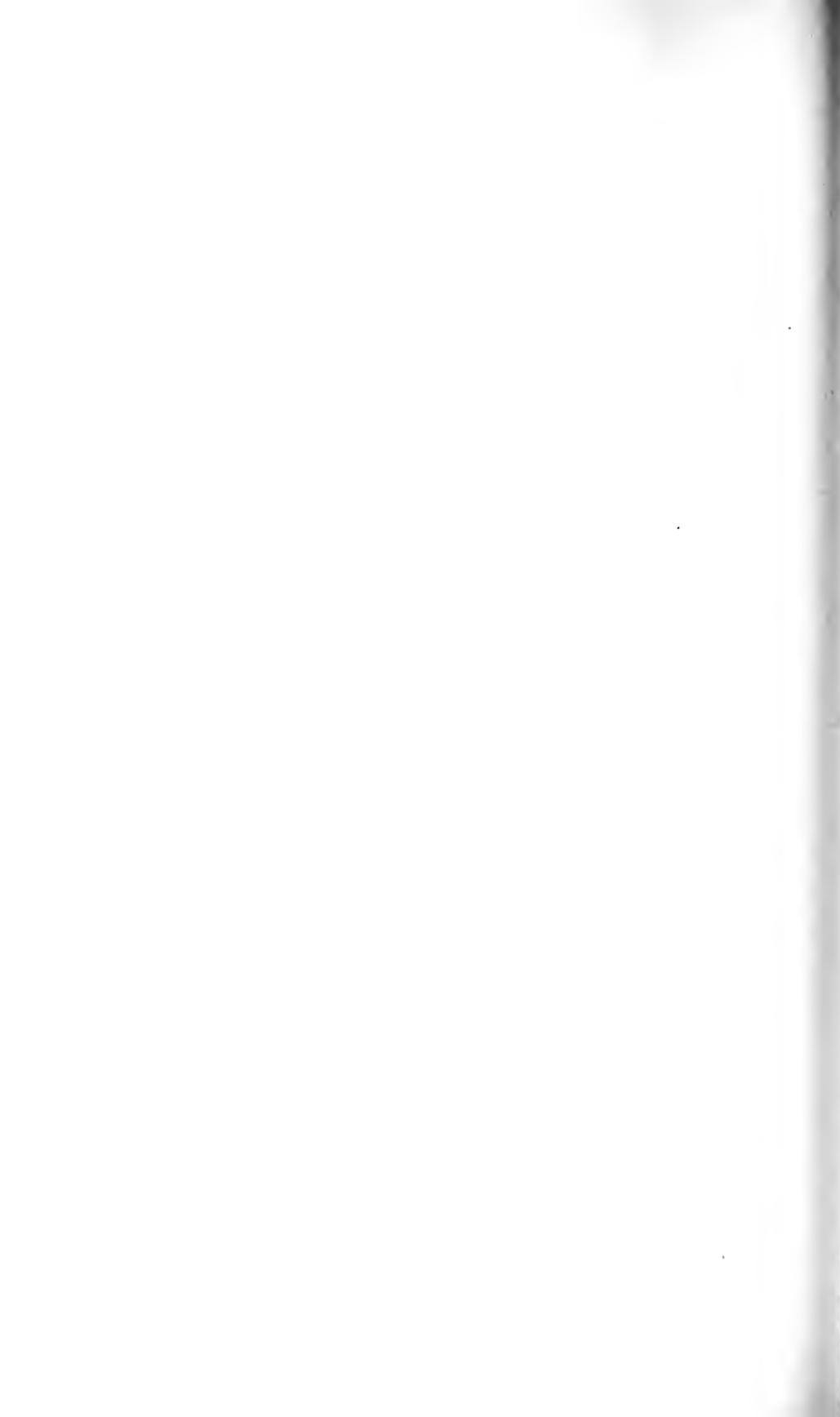
Transcript of Record

Upon Appeal from the District Court of the United States for the Northern District of California, Southern Division.

Filed

FEB 16 1934

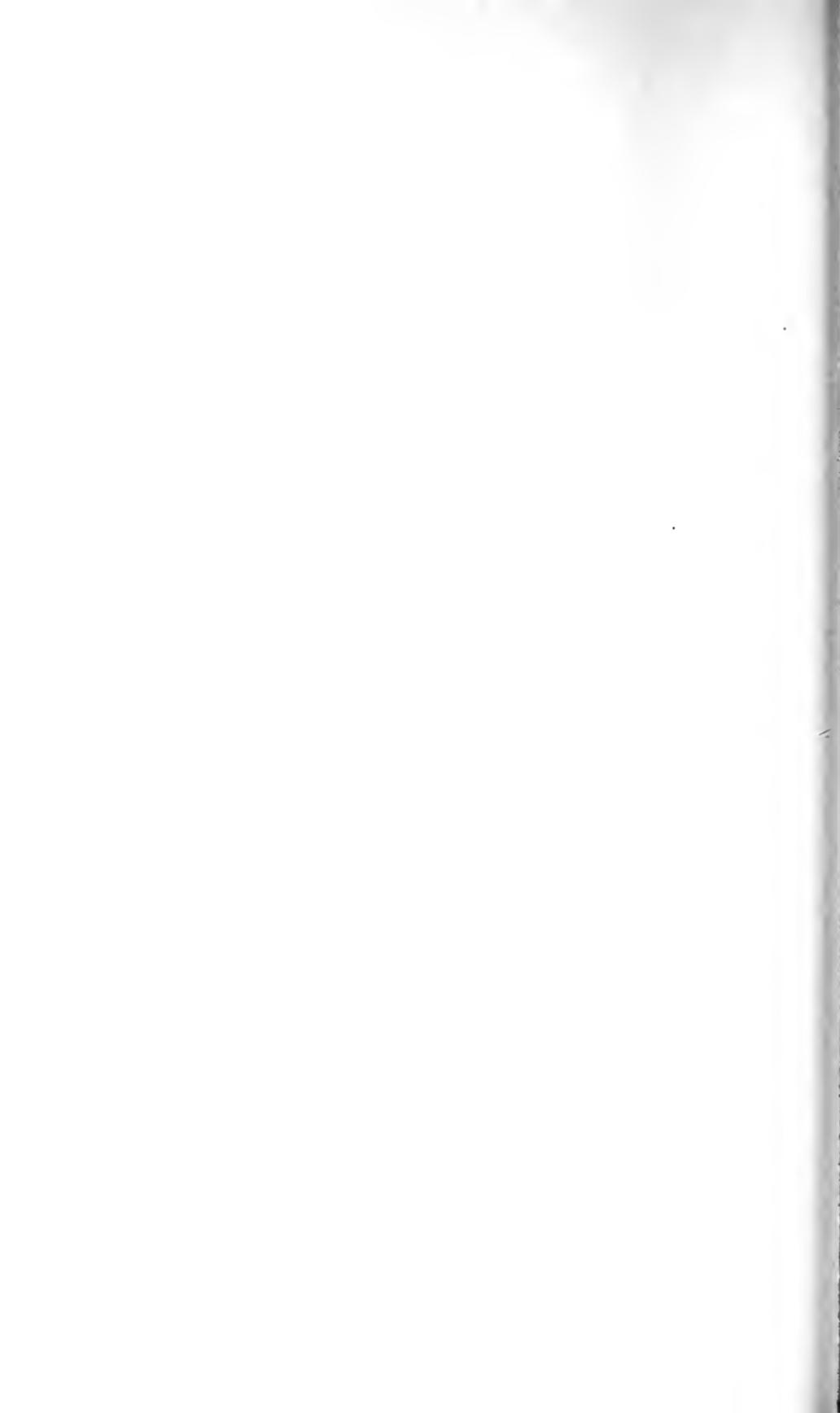
PAUL P. O'BRIEN,
CLERK



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[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in *italic*; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in *italic* the two words between which the omission seems to occur.]

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In the Southern Division of the United States
District Court for the Northern
District of California.

No. 1874 IN EQUITY.

GEO. W. COPPIN as trustee in bankruptcy of the
FLINTEX CORPORATION, a corporation,
Plaintiff,

vs.

ETHLYN B. CLEMENTS, individually and as
Administratrix of the estate of Ralph L.
Clements, also known as R. L. Clements, de-
ceased,

Defendant.

INTERLOCUTORY ORDER DIRECTING THE
DEFENDANT TO PAY OVER TO THE
COURT THE SUM OF \$16,784.20 BELONG-
ING TO THE FLINTEX CORPORATION,
BANKRUPT.

This cause came on regularly to be heard this
day of May, 1933, upon the report of W. E.

TUCKER, as Special Master, to whom it was referred, to take and state an account of certain trust funds passing into the hands of the defendant, ETHLYN B. CLEMENTS, both individually and as the administratrix of the estate of RALPH L. CLEMENTS, deceased, pursuant to the Interlocutory Decree herein, which report found that twenty-two thousand five hundred dollars (\$22,500.00) of said trust funds passed into her hands individually and seven thousand two hundred fifty-nine and 12/100 (\$7,259.12) dollars passed into her hands as administratrix of said estate, and said Report further found that eleven thousand nine hundred seventy-nine (\$11,979.00) dollars of said twenty-two thousand five hundred (\$22,500.00) dollars and four thousand eight hundred five and 20/100 (\$4,805.20) dollars of said sum of seven thousand [1*] two hundred fifty-nine and 12/100 (\$7259.12) dollars are now in her possession and control; and it appearing that no exceptions were filed to the Report of said Special Master within the time allowed by law, or at all; and it further appearing that the Report of said Special Master is in all respects true and correct,

IT IS ORDERED, that the report of W. E. TUCKER, as such Special Master be, and the same is hereby allowed and confirmed.

IT IS FURTHER ORDERED, that defendant, ETHLYN B. CLEMENTS, pay into the hands of the Clerk of this Court, subject to the further order of this court, said sum of eleven thousand nine hun-

*Page numbering appearing at the foot of page of original certified Transcript of Record.

dred seventy-nine dollars (\$11,979.00) and four thousand eight hundred five and 20/100 (\$4,805.20), dollars respectively, belonging to the estate of said bankrupt, THE FLINTEX CORPORATION, now in the possession and under the control of said defendant, within 10 days from the date of service hereof, and that jurisdiction is retained by this court to make such further orders and/or decrees as may be meet and proper.

Dated: May 22nd, 1933.

FRANK H. KERRIGAN,
United States District Judge.

[Endorsed]: Filed May 22, 1933. [2]

[Title of Court and Cause.]

ANSWER OF ETHLYN B. CLEMENTS TO
ORDER OF MAY 22, 1933.

Now comes Ethlyn B. Clements, defendant in the above-entitled action, and answers the order of the Court, herein, dated May 22, 1933, directing her to pay certain funds to the Clerk of said Court, as follows:

I.

Defendant denies that she has, individually or as administratrix of the Estate of Ralph L. Clements, deceased, in her possession, or under her control, the sums of \$11,979.00 and \$4805.20, mentioned in said order, or any portion of either of said sums.

WHEREFORE, defendant states that she is unable to comply with said order of May 22, 1933.

C. G. ATWOOD,
Attorney for Defendant. [3]

State of California

City and County of San Francisco—ss.

ETHLYN B. CLEMENTS, being first duly sworn, deposes and says:

That she is the defendant in the above entitled case; That she has read the foregoing answer to order of May 22, 1933, and knows the contents thereof; that the same is true of her own knowledge, except as to the matters therein stated upon information and/or belief, and as to those matters that she believes it to be true.

ETHLYN B. CLEMENTS.

Subscribed and sworn to before me this 3rd day of June, 1933.

(Seal)

AGNES M. COLE,
Notary Public, in and for the City
and County of San Francisco,
State of California.

Receipt of copy of the within answer is hereby acknowledged this 3rd day of June, 1933.

DINKELSPIEL & DINKELSPIEL.

[Endorsed]: Filed Jun 3, 1933. [4]

[Title of Court and Cause.]

AFFIDAVIT IN SUPPORT OF ORDER TO
SHOW CAUSE WHY DEFENDANT
SHOULD NOT BE ADJUDGED
GUILTY OF CONTEMPT.

State of California

City and County of San Francisco—ss.

Martin J. Dinkelspiel, being duly sworn deposes and says: That he is one of the attorneys for the plaintiff above named, and that he makes this affidavit for and on behalf of said plaintiff for the reason that said plaintiff resides beyond the boundaries of the State of California, to-wit; in the State of Ohio, and that said plaintiff is absent from the State of California, and for the further reason that your affiant is more conversant with the facts herein averred than said plaintiff.

Your affiant avers that on the 22nd day of May, 1933, this court made and filed an interlocutory order herein, a copy of which is annexed hereto as Exhibit "A" and made a part hereof, and in which the defendant above named was ordered and commanded by this court to pay to the Clerk of said Court certain trust funds more specifically in said order set forth within ten (10) days from the service of a copy of said order upon said defendant; that affiant is informed and believes and therefore avers that a copy of said order commanding and directing said defendant to pay over said trust funds to said Clerk was served upon the defendant, Ethlyn B. Clements, on the 24th day of May, 1933,

by the office of the United States Marshal for this district, as appears by a return thereof made and filed by said United States Marshal with the Clerk of this Court.

That affiant is further informed by the Clerk of the [5] above entitled court, and believes and therefore avers, that said defendant, Ethlyn B. Clements, has disobeyed said order of this Court and has failed and refused to pay over or to deposit with said Clerk said trust funds or any part thereof; that more than ten (10) days have elapsed since the service of said order upon said defendant.

WHEREFORE, plaintiff prays that an order to show cause be issued by this Court directing the defendant to appear before said Court upon a day certain to show cause why she should not be adjudged guilty of contempt for her failure and refusal to observe and perform the commands of said order directing her to pay over to the Clerk hereof said trust funds.

MARTIN DINKELSPIEL.

Subscribed and sworn to before me this 7th day of June, 1933.

[Seal]

MARK E. LEVY

Notary Public in and for the City and County of San Francisco, State of California. [6]

[Title of Court and Cause.]

INTERLOCUTORY ORDER DIRECTING THE
DEFENDANT TO PAY OVER TO THE
COURT THE SUM OF \$16,784.20 BELONG-
ING TO THE FLINTEX CORPORATION,
BANKRUPT.

This cause came on regularly to be heard this.....
day of May, 1933, upon the report of W. E.
TUCKER, as Special Master, to whom it was re-
ferred, to take and state an account of certain trust
funds passing into the hands of the defendant
ETHLYN B. CLEMENTS, both individually and
as the administratrix of the estate of RALPH L.
CLEMENTS, deceased, pursuant to the Interloe-
utory Decree herein, which report found that twenty
two thousand five hundred dollars (\$2,500.00) of
said trust funds passed into her hands individually
and seven thousand two hundred fifty nine and
12/100 (\$7,259.12) dollars passed into her hands as
administratrix of said estate, and said Report fur-
ther found that eleven thousand nine hundred sev-
enty nine (\$11,979.00) dollars of said twenty two
thousand five hundred (\$22,500.00) dollars and four
thousand eight hundred five and 20/100 (\$4,805.00)
dollars of said sum of seven thousand [7] two
hundred fifty nine and 12/100 (\$7259.12) dollars
are now in her possession and control; and it ap-
pearing that no exceptions were filed to the Report
of said Special Master within the time allowed
by law, or at all; and it further appearing that the
Report of said Special Master is in all respects true
and correct,

IT IS ORDERED, that the report of W. E. TUCKER, as such Special Master be, and the same is hereby allowed and confirmed.

IT IS FURTHER ORDERED, that defendant, ETHLYN B. CLEMENTS, pay into the hands of the Clerk of this Court, subject to the further order of this court, said sum of eleven thousand nine hundred seventy nine dollars (\$11,979.00) and four thousand eight hundred five and 20/100 (\$4,805.20), dollars respectively, belonging to the estate of said bankrupt, THE FLINTEX CORPORATION, now in the possession and under the control of said defendant, within 10 days from the date of service hereof, and that jurisdiction is retained by this court to make such further orders and/or decrees as may be meet and proper.

Dated: May 22nd 1933.

FRANK H. KERRIGAN
United States District Judge.

[Endorsed]: Filed Jun 7 1933. [8]

[Title of Court and Cause.]

ORDER TO SHOW CAUSE WHY DEFENDANT SHOULD NOT BE ADJUDGED GUILTY OF CONTEMPT FOR FAILURE TO COMPLY WITH THE ORDER OF THE COURT.

Upon reading and considering the affidavit of Martin J. Dinkelspiel, duly verified, filed herein on

behalf of plaintiff, and it appearing therefrom that the defendant, Ethlyn B. Clements, has disobeyed the commands of an order heretofore made and entered by this Court whereby the said Ethlyn B. Clements was commanded to pay over to the Clerk of this Court certain trust funds in said order more particularly specified within ten (10) days from service of a copy of said order upon her, and

It appearing, that said order was served upon the said Ethlyn B. Clements, and that more than ten (10) days have expired since the service thereof upon her, and that she has failed and refused to pay over said trust funds or any part thereof to the Clerk of this Court as in said order specified, and it appearing to be a proper case therefor, now upon motion of Dinkelspiel & Dinkelspiel, attorneys for plaintiff,

IT IS ORDERED that Ethlyn B. Clements, individually and as administratrix of the estate of Ralph L. Clements, deceased be, and appear in her proper person before this Court at Room 332 of the Post Office Building, at the corner of Seventh & Mission Streets, in the City and County of San Francisco, State of California, on the 19th day of June, 1933, at the hour of 10 o'clock A.M. of said day or as soon thereafter as counsel can be heard to show cause, if any she has, why she should not be punished for contempt for disobeying said order of this Court made and filed herein on the 22nd [9] day of May, 1933, and served upon her on the 24th day of May, 1933, commanding her to pay over to

the Clerk of this Court certain trust funds in said order more particularly specified.

Service of this order may be made upon said Ethlyn B. Clements by serving a copy thereof, together with a copy of the affidavit in support thereof upon her attorney, Clarence G. Atwood, or by service thereof upon the said Ethlyn B. Clements.

Witness my hand at chambers this 7th day of June, 1933.

FRANK H. KERRIGAN

Judge of the United States District Court.

[Endorsed]: Filed Jun 7 1933. [10]

[Title of Court and Cause.]

ORDER OF IMPRISONMENT FOR COMMISSION OF CIVIL CONTEMPT.

An interlocutory decree having been made and entered by this Court, on the 11th day of June, 1931, impressing an involuntary trust upon certain funds which passed into the hands of the defendant, ETHLYN B. CLEMENTS, both individually, and as administratrix of the Estate of Ralph L. Clements, her deceased husband, in favor of the plaintiff, GEO. W. COPPIN, as Trustee in Bankruptcy of THE FLINTEX CORPORATION; and said matter having been referred by said interlocutory decree to W. E. TUCKER, as Special Master in Chancery for an accounting of trust funds, and that said defendant, ETHLYN B. CLEMENTS,

make true and correct accounting forthwith before said Special Master, and that said Special Master make report thereof to this Court with all convenient speed; and

It appearing that an accounting was taken before said Special Master in Chancery, pursuant to said order of this Court and that the report of the Special Master of said accounting was made and returned to this Court on the 21st day of April, 1933; and that in and by said report, said Special Master found, that the sum of Twenty-two Thousand [11] Five Hundred (\$22,500.00) Dollars of said trust funds passed into her hands individually, and Seven Thousand Two Hundred Fifty-Nine and 12/100 (\$7,259.12) Dollars of said trust funds passed into her hands as administratrix of the estate of her said deceased husband, Ralph L. Clements; and

It appearing in and by said report that said Special Master further found that the sum of Eleven Thousand Nine Hundred Seventy-nine (\$11,979.00) Dollars of said sum of Twenty-two Thousand Five Hundred (\$22,500.00) Dollars, and the sum of Four Thousand Eight Hundred Five and 20/100 (\$4,805.20) Dollars of said sum of Seven Thousand Two Hundred Fifty-nine and 12/100 (\$7,259.12) Dollars, aggregating the sum of Sixteen Thousand Seven Hundred Eighty-Four and 20/100 (\$16,784.20) Dollars of said trust funds remain in her hands and unaccounted for; and

It further appearing that no exceptions have been taken to the report of said Special Master by

either the plaintiff or defendant, and that more than twenty (20) days after the return and filing of the report of said Special Master with the Clerk of this Court, this Court upon motion of the plaintiff, made and entered an order dated May 22nd, 1933, allowing and confirming the report of said Special Master and ordering and directing said defendant, ETHLYN B. CLEMENTS, within ten (10) days from the date of service upon her of said order to pay over said sums of Eleven Thousand Nine Hundred Seventy-nine (\$11,979.00) Dollars and Four Thousand Eight Hundred Five and 20/100 (\$4,805.20) Dollars, said trust funds, to the Clerk of this Court; and

It further appearing that said order directing the payment of said trust funds over to said Clerk was personally served upon the defendant, ETHLYN B. CLEMENTS, on the 24th day of May, 1933; and [12]

It further appearing that plaintiff, GEO. W. COPPIN, as Trustee in Bankruptcy of THE FLINTEX CORPORATION, on the 7th day of June, 1933, filed with this Court and served upon said defendant, ETHLYN B. CLEMENTS, an order to show cause why said defendant should not be adjudged guilty of contempt for her disobedience and willful failure to comply with said order of this Court dated May 22nd, 1933, and that said order to show cause was made returnable on the 19th day of June, 1933, and on said date, said order to show cause having come on regularly for hearing before me, the undersigned District Judge, and that plain-

tiff appeared at said hearing by his counsel, DINKELSPIEL & DINKELSPIEL, and that the defendant ETHLYN B. CLEMENTS, and her counsel, CLARENCE G. ATWOOD, personally appeared at said hearing; and

It appearing that said defendant, ETHLYN B. CLEMENTS, has wilfully disobeyed said order of this court and has willfully failed and refused to pay over to the Clerk said sums of money, said trust funds, as aforesaid, found to be in her hands by said Special Master, or any part thereof, and the Court being fully advised in the premises and it being a proper case therefor,

IT IS ORDERED that ETHLYN B. CLEMENTS, the defendant herein, be, and she is hereby adjudged guilty of contempt of the above entitled Court in her willful disobedience and willful failure to comply with the order of this Court dated May 22nd, 1933.

IT IS FURTHER ORDERED that ETHLYN B. CLEMENTS, said defendant, be, and she is hereby remanded to the Custody of the United States Marshall for this District, to be by him confined in the County Jail, of the City and County of San Francisco, State of California, until the said ETHLYN B. CLEMENTS shall have complied with the order of this Court, [13] ordering and directing her to pay over to the Clerk of this Court the sum of Sixteen Thousand Seven Hundred Eighty-four and 20/100 (\$16,784.20) Dollars, belonging to

THE FLINTEX CORPORATION, bankrupt, or
until the further order of this Court.

Dated: June 19th, 1933.

FRANK H. KERRIGAN,
United States District Judge. [14]

[Title of Court and Cause.]

ORDER OF COMMITMENT TO JAIL
FOR CIVIL CONTEMPT

The Court having heretofore made and entered its order adopting and confirming the report of W. E. Tucker as Special Master in Chancery finding the defendant, ETHLYN B. CLEMENTS, in contempt of this Court in her failure to comply with an order of this court dated May 22nd, 1933,

IT IS ORDERED that ETHLYN B. CLEMENTS, defendant herein, be committed in the custody of the United States Marshall and that she be by him confined in the County Jail in the City and County of San Francisco, State of California, until she complies with the order of this Court directing her to turn over, pay and deposit with the Clerk of this Court the sum of Sixteen Thousand Seven Hundred Eighty-four and 20/100 (\$16,784.20) Dollars, or until further order of this Court;

IT IS FURTHER ORDERED that said United States Marshall shall, upon execution of his order make his return thereof to the Clerk of the above entitled Court on or before June 20th, 1933.

Dated: San Francisco, California, June 19th,
1933.

FRANK H. KERRIGAN,
United States District Judge.

[Endorsed]: Filed June 19, 1933. [15]

District Court of the United States
Northern Division of California
Southern Division

AT A STATED TERM of the Southern Division of the United States District Court for the Northern District of California, held at the Court Room thereof, in the City and County of San Francisco, on Monday, the 19th day of June, in the year of our Lord one thousand nine hundred and thirty-three.

PRESENT: the Honorable Frank H. Kerrigan,
District Judge.

No. 1874

GEO. W. COPPIN, ETC.,

vs.

ETHLYN B. CLEMENTS, ETC.

After hearing D. K. Lener, Esq., attorney for plaintiff, and C. G. Atwood, Esq., attorney for defendant Ethlyn B. Clements, who was present in court. It appearing that said Ethlyn B. Clements is guilty of contempt of this Court, in failing to comply with the Order of the Court dated May 22, 1933, commanding her to pay over to the Clerk of this Court certain Funds as more fully appears in

said Order; therefore, it is Ordered, adjudged and Decreed that said Ethlyn B. Clements is guilty of contempt of this Court and it is further Ordered that said Ethlyn B. Clements, for such contempt be imprisoned in a County Jail until said Order be complied with or until the further order of this Court. Further Ordered that she be and is committed to the custody of a U. S. Marshall to execute said order of imprisonment and that a Commitment issue, as more fully appears in Order and Judgment this day signed and filed. [16]

[Title of Court and Cause.]

STATEMENT OF COURT ON HEARING OF
ORDER TO SHOW CAUSE IN PROCEED-
INGS FOR CIVIL CONTEMPT.

On the 7th day of June, 1933, the Court issued an Order directing the defendant, **ETHLYN B. CLEMENTS**, to appear on the 19th day of June, 1933, before the above entitled court, and show cause, why she should not be adjudged guilty of contempt for her failure and refusal to comply with the Interlocutory Order of this Court made the 22nd day of May, 1933, directing said defendant, within ten (10) days from the service thereof upon her to pay to the Clerk of this Court, the aggregate sum of Sixteen thousand seven hundred eighty four and 20/100 (\$16,784.20) Dollars adjudged by the Interlocutory Decree made and entered herein on the 26th day of

June, 1931, to be trust funds belonging to the plaintiff, GEO. W. COPPIN, as Trustee of the Flintex Corporation, bankrupt, and found to be in the possession and control of said defendant by an accounting taken before W. E. Tucker, as Special Master in Chancery in his report filed with this court and which was allowed and confirmed by this court, and to which no exceptions or objections were filed by said [17] defendant. Upon said 19th day of June, 1933, the date set in said Order to show cause for the hearing thereof, the defendant ETHLYN B. CLEMENTS, and C. G. ATWOOD, ESQ. her Attorney appeared in court in answer to said Order to show cause and DINKELSPIEL & DINKELSPIEL, ESQS., appeared as Attorneys for plaintiff. That thereupon said Order to show cause duly came on for hearing, and upon a showing made by the plaintiff to the satisfaction of the court that defendant, ETHLYN B. CLEMENTS had been duly served with copies of each Order of May 22nd, 1933, and said Order to show cause, and that defendant had failed and refused within the times set by said Order of May 22nd, 1933, or at all, to pay over to the Clerk of this court, subject to further Order of this court, said trust funds or any part thereof, found to be in her possession and control, called upon the defendant to show cause why she, should not be adjudged guilty of contempt for her failure to comply with the Court's order of May 22nd, 1933, directing her to pay over said trust funds in the manner therein provided. That defendant thru her attorney

of record, C. G. Atwood thereupon stated to the Court that her excuse for non-compliance with said Order of May 22nd, 1933, was her failure to present certain facts in addition to those presented by her on the accounting proceedings before the Special Master, and moved the court for a re-reference in order to allow defendant to present those additional facts to the Special Master for the purpose of accounting to him the disposition of said trust funds. No reason being assigned by defendant's counsel, or by the defendant, why she had not presented any such evidence before the Special Master during the accounting taken before him and prior to the making of the Order of this court under date of May 22nd, 1933, nor why she had not taken any exceptions or made any objections to the report of the [18] Special Master, the court denied the motion for a re-reference. No further evidence of any character being offered by defendant, nor heard by the court in behalf of either party, nor any attempt made to show her inability to pay over said trust fund, or any part thereof as directed by said Order of May 22nd, 1933, before or after the making of said order by the court, nor any showing being made by defendant as to any change in respect to defendant's possession of said trust fund, since the making, or the service of said order of May 22nd, 1933, the Court made its order and decree adjudging the defendant guilty of civil contempt and ordered her committed to the custody of the United States Marshal, to be confined by him in the County

Jail of the City and County of San Francisco, State of California, until she shall have complied with said Order of the court directing her to pay over said trust funds to the Clerk of the court. That pursuant to said order of commitment, defendant was confined in said jail from said 19th day of June, 1933, to and including the 24th day of June, 1933, on which day defendant was released from said jail upon furnishing a bond in the sum of Two Thousand Five Hundred (\$2,500.00) Dollars, after an appeal from said order of commitment of said court to the United States Circuit Court of Appeals had been perfected.

No exceptions or objections were made by defendant, or her counsel to the court's denial of defendant's informal motion for a re-reference to the Special Master, or as against any Order or Decree made, or as against any proceedings taken at the hearing of said order to show cause, nor were any other proceedings taken before this court by defendant, save the appeal taken from the judgment and Decree of contempt herein.

This statement is made by the court in the absence [19] of a record preserved by a court reporter, both parties having failed to ask for a court reporter at the proceedings.

Dated: Sept. 25th, 1933.

FRANK H. KERRIGAN,

U. S. District Judge.

[Endorsed]: Filed Sept. 26, 1933. [20]

This statement of the court may be substituted for the one signed and filed by the court.

DINKELSPIEL & DINKELSPIEL,
Attorneys for Plaintiff.

[Title of Court and Cause.]

PETITION FOR APPEAL.

ETHLYN B. CLEMENTS, individually and as Administratrix of the estate of Ralph L. Clements, also known as R. L. Clements, deceased, in the above entitled case, feeling herself aggrieved by the decree and order entered in the above entitled case on the 19th day of June, 1933, whereby this appellant was committed to the County Jail for failure to pay the clerk of this Court the sum of \$11,971.00 and the further sum of \$4805.20, and until said sum was paid by her; that she has been confined in the County Jail of the City and County of San Francisco ever since the date of said order and is *no* so confined and restrained from her liberty in the custody of the Sheriff of said City and County; that a transcript of the record of the proceedings, papers and exhibits upon which said decree and order is made duly authenticated may be sent to the United States Circuit Court of Appeals for the Ninth Circuit.

C. G. ATWOOD,
Attorney for Appellant.

Service of the within petition for appeal is hereby admitted by copy this 23rd day of June, 1933.

DINKELSPIEL & DINKELSPIEL,

Attorneys for Plaintiff.

[Endorsed] Filed June 24, 1933. [21]

[Title of Court and Cause.]

ASSIGNMENTS OF ERRORS.

The defendant, Ethlyn B. Clements, individually and as Administratrix of the estate of Ralph L. Clements, also known as R. L. Clements, deceased, says:

There is manifest error in the record herein and assigns and specifies as such the following:

1. That the United States District Court for the Northern District of California, Southern Division, is and was without jurisdiction to make and enter the order under the date of the 19th day of June, 1933, whereby said defendant was committed to the County Jail of the City and County of San Francisco, in default of her paying the sum of \$11,971.00 and the further sum of \$4805.20; that said order is contrary to the provisions of section 725, of the revised statute of the United States.

2. That the said District Court after issuing an order on this defendant to show cause why she should not be fined for contempt of Court, the defendant filed her answer herein and appeared at the time set for hearing on the order to show cause, to-wit: the 19th day of June 1933; that in said

answer of defendant, she denied that she had in her possession or under her control, the sums of \$11,971.00 and the sum of \$4805.20, or any [22] portion of either of said sums; that the defendant further alleged in said answer that she is unable to comply with the said order of May 22, 1933, which order required this defendant to pay said sums of money into the hands of the Clerk of said District Court within ten days from and after the 22nd day of May, 1933; that although said defendant appeared and filed said answer, the said District Court without giving her an opportunity to show cause why she should not be fined for contempt, thereupon immediately committed her to the said County Jail of the City and County of San Francisco, and that she was not given an opportunity to show cause why she should not be confined for contempt of said court.

3. That the order of commitment, committing the defendant forthwith to the County Jail of the City and County of San Francisco so made and given on the 19th day of June, 1933, was arbitrary, unreasonable and without due process of law.

4. That the order of commitment so made on the 19th day of June, 1933, was in effect and as a matter of fact, an imprisonment for debt and is contrary to the laws of the constitution of the United States.

5. That the defendant clearly showed in her answer her inability to pay said money, and as the alleged contempt was a constructive contempt, and

on the issue as to whether the defendant was able to pay said money, she was entitled to a trial by jury, which trial was denied by the court.

6. That the District Court erred in not giving the defendant an opportunity to offer evidence and in conformity with the order to show cause hereinbefore referred to, that she be permitted to offer evidence and show her inability to pay said money and comply with the order of said Court.

7. That the order made by said District Court on the 19th day of June, 1933, committing this defendant to the County [23] Jail of the City and County of San Francisco is contrary to and in violation of Section 69, of Volume 11, U.S.C.A., page 146, being the provisions relative to Bankruptcy act of the United States.

C. G. ATWOOD,
Attorney for Appellant

Service of the within assignment of errors is hereby admitted by copy this 23rd day of June, 1933.

DINKELSPIEL & DINKELSPIEL,
Attorneys for Plaintiff.

[Endorsed]: Filed June 24, 1933. [24]

[Title of Court and Cause.]

ORDER ALLOWING APPEAL.

It appearing that the defendant, Ethlyn B. Clements, individually and as Administratrix of the estate of Ralph L. Clements, also known as R.

L. Clements, deceased, has heretofore filed her petition for an appeal from the decree and the order made and entered herein on the 19th day of June, 1933, whereby she was found guilty of contempt and committed to the County Jail of the City and County of San Francisco, to the Circuit Court of Appeals of the United States for the Ninth Circuit,

NOW THEREFORE, IT IS HEREBY ORDERED that the appeal of said defendant to the United States Circuit Court of Appeals for the Ninth Circuit be and the same is hereby allowed; and

IT IS FURTHER ORDERED that the defendant, in her individual capacity and as administratrix as aforesaid, effect and furnish an undertaking for the purpose of securing the costs of this appeal in the sum of Two Hundred and Fifty Dollars; and an appearance or bail bond in the penal sum of \$2500.00.

Dated: This 24th day of June, 1933.

FRANK H. KERRIGAN,
United States District Judge.

Service of the within order allowing appeal is hereby admitted this day of , 1933.

Attorney for Plaintiff.

[Endorsed]: Filed June 24, 1933. [25]

No. 1453966

THE FIDELITY AND
CASUALTY COMPANY OF NEW YORK

[Title of Court and Cause.]

COST APPEAL BOND.

Know all men by these presents:

That THE FIDELITY AND CASUALTY COMPANY OF NEW YORK, a corporation organized and existing under the laws of the State of New York, is held and firmly bound unto the Plaintiff in the above entitled suit in the just and full sum of TWO HUNDRED FIFTY AND 00/100 (\$250.00) Dollars, for the payment of which well and truly to be made, it binds itself, its successors and assigns.

Sealed with our seals and dated this 26th day of June, 1933.

Whereas, the Defendant, Ethlyn B. Clements, individually and as Administratrix of the Estate of Ralph L. Clements, also known as R. L. Clements, Deceased, is appealing to the United States Circuit Court of Appeals for the Ninth Circuit from a decree and order made in the above entitled suit on the 19th day of June, 1933, and said appeal was allowed by an order of the above entitled Court made on the 24th day of June, 1933;

NOW, THEREFORE, in consideration of the premises and of such appeal, the undersigned, THE FIDELITY AND CASUALTY COMPANY OF NEW YORK, does hereby undertake and promise on the part of the Appellant, Ethlyn B. Clements,

individually and Ethlyn B. Clements as administratrix of the Estate of Ralph L. Clements, also known as R. L. Clements, deceased, that said appellant will pay all damages and costs which may be awarded against her on the appeal, or on a dismissal thereof, not exceeding TWO HUNDRED FIFTY AND 00/100 (\$250.00) Dollars, to which amount it acknowledges itself bound.

It is further stipulated as a part of the foregoing suit that in case of the breach of any condition thereof, the above named District Court, may upon not less than ten (10) days notice to the Surety above named, proceed summarily in the above entitled suit to ascertain the amount which said Surety is bound to pay on account of such breach, and render judgment therefor against said Surety and award execution therefor. [26]

IN WITNESS WHEREOF, the said surety has caused these presents to be executed and its official seal attached by its duly authorized attorney at San Francisco, California, the 26th day of June, 1933.

THE FIDELITY AND CASUALTY
COMPANY OF NEW YORK

By: L. F. CALLAHAN
Attorney.

[Seal]

The foregoing bond is hereby approved.
June 26, 1933. FRANK H. KERRIGAN
U. S. District Judge.

State of California

City and County of San Francisco—ss.

On this 26th day of June in the year one thousand nine hundred and thirty three before me J. G. Roberts a Notary Public in and for the said City and County of San Francisco residing therein, duly commissioned and sworn, personally appeared L. F. Callahan known to me to be the Attorney of The Fidelity and Casualty Company of New York, the Corporation that executed the within instrument, and known to me to be the person who executed the said instrument on behalf of the Corporation therein named and acknowledged to me that such Corporation executed the same.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal in the County of San Francisco the day and year in this certificate first above written.

[Seal]

J. G. ROBERTS,

Notary Public in and for the City and County of San Francisco, State of California.

My commission expires October 29, 1933.

[Endorsed]: Filed June 26, 1933. [27]

[Title of Court and Cause.]

PRAECIPE FOR TRANSCRIPT OF RECORD
ON APPEAL.

To the Clerk of the above-entitled Court:

Please make up and certify the record on appeal heretofore allowed herein and include in the transcript therein the followin:

1. Interlocutory Order dated May 22, 1933, directing defendant to pay over to the Court \$16,-784.20.

2. Answer of defendant to order of May 22, 1933.

3. Order to show cause why defendant should not be adjudged guilty of contempt for failure to comply with the order of the Court, which order to show cause is dated and filed in this court on the 7th day of June, 1933.

4. Affidavit of Martin J. Dinkelspiel, herein, dated the 7th day of June, 1933, and filed herein on said date.

5. The decree and order committing the defendant to the County Jail of the City and County of San Francisco and into the custody of the Sheriff of said City and County, which order of commitment is dated the 19th day of June, 1933.

6. Order of imprisonment for commission of civil contempt, dated June 19, 1933.

7. The minutes of the Court made at the time of the hearing of the order to show cause on June 19, 1933.

8. The Petition for Appeal.

9. The Order allowing the appeal.

10. Cost Bond on Appeal.
11. The assignment of errors.
12. This Praecipe.

C. G. ATWOOD,
Attorney for Appellant. [28]

Receipt of copy of the within Praecipe for Transcript of record on appeal is hereby acknowledged this 1st day of July, 1933.

DINKELSPIEL & DINKELSPIEL,
Atty's. for Plaintiff.

[Endorsed]: Filed July 1, 1933. [29]

[Title of Court and Cause.]

PRAECIPE FOR ADDITIONAL PORTIONS
OF RECORD TO BE INSERTED IN TRAN-
SCRIPT ON APPEAL

Plaintiff designates the following portions of the record to be incorporated in the transcript on appeal in addition to those enumerated by defendant in her praecipe heretofore filed, to-wit:

1. Statement of court on hearing of order to show cause in proceedings for civil contempt filed September 11, 1933.

2. This praecipe.

Dated: San Francisco, California, September 13, 1933.

DINKELSPIEL & DINKELSPIEL,
Attorneys for Plaintiff.

Service of the foregoing and within praecipe by copy acknowledged this 13th day of September, 1933.

THOMAS F. McCUE,
Attorneys for Defendant.

[Endorsed]: Filed Sept. 14. 1933 [30]

District Court of the United States
Northern District of California

CERTIFICATE OF CLERK TO TRANSCRIPT
OF RECORD ON APPEAL.

I, WALTER B. MALING, Clerk of the United States District Court, for the Northern Division of California, do hereby certify that the foregoing 30 pages, numbered from 1 to 30, inclusive, contain a full, true, and correct transcript of the records and proceedings in the case of Geo. W. Coppin, etc. vs. Ethlyn B. Clements, Etc., No. 1874, as the same now remain on file and of record in my office.

I further certify that the cost of preparing and certifying the foregoing transcript of record on appeal is the sum of \$11.05 and that the said amount has been paid to me by the Attorney for the appellant herein.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said District Court, this 2nd day of October, A. D. 1933.

[Seal]

WALTER B. MALING,
Clerk.

J. P. WELSH,
Deputy Clerk [31]

[Title of Court and Cause.]

CITATION ON APPEAL

The United States of America, to George W. Coppin, Trustee in Bankruptcy of the Flintex Corporation, a Corporation:

You are hereby cited and admonished to be and appear in the United States Circuit Court of Appeals for the Ninth Circuit to be held in the City and County of San Francisco, State of California, within thirty days from the date of this citation, pursuant to an appeal filed in the Clerk's office of the Southern Division of the United States District Court for the Northern District of California, wherein George W. Coppin, as Trustee in Bankruptcy of the Flintex Corporation, A Corporation, is plaintiff and Ethlyn B. Clements, in her individual capacity and as Administratrix of the estate of Ralph L. Clements, also known as R. L. Clements, deceased, is defendant in the above entitled cause, to show cause, if any there be, why the decree and order rendered in said case appealed from should not be revised and corrected and speedy justice should be done to the parties in that behalf.

WITNESS, the Honorable FRANK H. KERRIGAN, United States District Judge for the Northern District of California, this 29th day of June, 1933.

FRANK H. KERRIGAN,
United States District Judge [32]

Service and receipt of copy of the within Citation

on Appeal is hereby admitted this 30th day of June, 1933.

DINKELSPIEL & DINKELSPIEL,

Attorney for Plaintiff.

[Endorsed]: Filed June 30, 1933.

[Endorsed]: No. 7306. United States Circuit Court of Appeals for the Ninth Circuit. Ethlyn B. Clements, individually and as Administratrix of the estate of Ralph L. Clements, also known as R. L. Clements, deceased, Appellant, vs. George W. Coppin, as trustee in Bankruptcy of the estate of the Flintex Corporation, a corp., Appellee. Transcript of Record. Upon Appeal from the District Court of the United States for the Northern District of California, Southern Division.

Filed October 14, 1933.

PAUL P. O'BRIEN,

Clerk of the United States Circuit Court of Appeals
for the Ninth Circuit.

No. 7306

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

ETHELYN B. CLEMENTS, individually and as
administratrix of the estate of Ralph L.
Clements, also known as R. L. Clements,
deceased,

Appellant,

vs.

GEORGE W. COPPIN, as trustee in bank-
ruptcy of the estate of the Flintex Cor-
poration (a corporation),

Appellee.

BRIEF FOR APPELLANT.

Upon Appeal from the District Court of the United States
for the Northern District of California,
Southern Division.

THOMAS F. MCCUE,

625 Market Street, San Francisco,

Attorney for Appellant.

Filed

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PAUL P. GIBSON



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No. 7306

IN THE
United States Circuit Court of Appeals
For the Ninth Circuit

ETHLYN B. CLEMENTS, individually and as
administratrix of the estate of Ralph L.
Clements, also known as R. L. Clements,
deceased,

Appellant,

vs.

GEORGE W. COPPIN, as trustee in bank-
ruptcy of the estate of the Flintex Cor-
poration (a corporation),

Appellee.

BRIEF FOR APPELLANT.

Upon Appeal from the District Court of the United States
for the Northern District of California,
Southern Division.

STATEMENT OF CASE.

This case involves a proceeding in contempt. On the 7th day of June, 1933, Martin J. Dinkelspiel, one of the attorneys for the plaintiff and appellee, filed in the lower court an affidavit upon information and belief charging that appellant had failed and refused to pay certain alleged trust funds (Trans. 5) as ordered by an interlocutory order dated May 22, 1933

(Trans. 1-2-3), and asking that she be required to show cause why she should not be punished for contempt.

The order to show cause was issued on June 7, 1933 (Trans. 8), fixing the time for such appearance for June 19, 1933. To this order to show cause appellant filed her answer under oath in which she denied that she had in her possession or under her control any of said money or any part of it, also alleging that she was unable to comply with said order to pay the money. (Trans. 3-4.)

On the 19th day of June, 1933, appellant appeared in the lower court pursuant to said order as the minutes of the court of that day show. (Trans. 15.) These minutes show that:

“It appearing that said Ethlyn B. Clements is guilty of contempt of this court, in failing to comply with the order of the court dated May 22, 1933, commanding her to pay over to the clerk of this court certain funds as more fully appears in said order”

then it is immediately adjudged that the appellant is guilty of contempt of court and she is ordered imprisoned in the County Jail. (Trans. 15-16.)

From the foregoing it appears that no trial or hearing in fact was had. Neither the order of commitment (Trans. 14) nor any other order in the case finds or states or shows that the appellant was able to perform the order of May 22, 1933, or to pay the money which she was ordered to pay. From the order of commitment and the judgment finding appellant

guilty of contempt of court (Trans. 14) this appeal is taken.

ARGUMENT.

The report of the Special Master was not made a part of the proceeding upon which the order of the trial judge made on May 22, 1933. (Trans. 1-2-3.) The trial judge made his findings from said report, and as far as those findings are concerned, they in no manner show how the Special Master arrived at his conclusions.

The order recites:

“This cause came on regularly to be heard this day of May, 1933, upon the report of W. E. Tucker, as Special Master, to whom it was referred, to take and state an account of certain trust funds passing into the hands of the defendant, Ethlyn B. Clements, both individually and as the administratrix of the estate of Ralph L. Clements, deceased, pursuant to the interlocutory decree herein, which report found that twenty-two thousand five hundred dollars (\$22,500.00) of said trust funds passed into her hands individually and seven thousand two hundred fifty-nine and 12/100 (\$7,259.12) dollars passed into her hands as administratrix of said estate, and said report further found that eleven thousand nine hundred seventy-nine (\$11,979.00) dollars of said twenty-two thousand five hundred (\$22,500.00) dollars and four thousand eight hundred five and 20/100 (\$4,805.20) dollars of said sum of seven thousand two hundred fifty-nine and 12/100 (\$7,259.12) dollars are now in her possession and control; and it appearing that no excep-

tions were filed to the report of said Special Master within the time allowed by law, or at all; and it further appearing that the report of said Special Master is in all respects true and correct,

It is ordered that the report of W. E. Tucker, as such Special Master be, and the same is hereby allowed and confirmed.

It is further ordered that defendant, Ethlyn B. Clements, pay into the hands of the clerk of this court, subject to the further order of this court, said sum of eleven thousand nine hundred seventy-nine dollars (\$11,979.00) and four thousand eight hundred five and 20/100 (\$4,805.20), dollars, respectively, belonging to the estate of said bankrupt, The Flintex Corporation, now in the possession and under the control of said defendant, within 10 days from the date of service hereof, and that jurisdiction is retained by this court to make such further orders and/or decrees as may be meet and proper.

Dated, May 22nd, 1933.

Frank H. Kerrigan,
United States District Judge.”

but it is nowhere shown that the Special Master took any account or examined any records or took any evidence. As far as anything contained in the order is concerned, the Special Master might have arrived at his conclusions in the most perfunctory manner.

The whole proceeding shows that a Special Master was appointed to determine what part of the alleged trust fund passed into the defendant's hands and that such Special Master made some sort of a report and upon that report the trial court made a summary

order that defendant pay the money to the clerk. (Trans. 2.) To this order the defendant filed her answer under oath, denying that she had any of said money in her possession or under her control and that she is unable to comply with said order. Then the court ordered defendant to appear in court on the 19th day of June, 1933, and show cause why she should not be adjudged guilty of contempt for her failure and refusal to comply with the interlocutory order of this court made the 22nd day of May, 1933, requiring her to pay to the clerk \$16,000.00. (Trans. 16.)

The defendant did appear in court on the 19th day of June, 1933 (Trans. 15), and on that day without any hearing or the taking of any evidence, the court committed the defendant to the County Jail and that she be held until she turns over and pays \$16,000.00 to the clerk. (Trans. 14.)

There is incorporated in the transcript a statement of the court as to what transpired in court on June 19, 1933. (Trans. 16.) This statement is dated September 25, 1933, three months after she had been committed to jail. This statement evidently was gotten up by counsel for plaintiff in an attempt to supply the place of a record of a hearing had on June 19, 1933. However, said statement does recite:

“No further evidence of any character being offered by the defendant, nor heard by the court in behalf of either party.” (Trans. 18.)

This statement has no place in the record. It is not a record required to be made by law.

The praecipe (Trans. 28) did not specify that this statement of the court be incorporated in the record and it cannot be considered for any purpose as it has no place in the record. It is not an opinion of the trial court nor an amendment to any order or judgment in the case.

“Where the proposed addition is mere afterthought, and forms no part of the judgment as originally intended and pronounced, it can not be brought in by way of amendment.”

Seaman v. Bonslett, 118 Cal. 93.

From the record, to our minds, it is clear that no hearing was had, and that plaintiff offered no evidence to overcome the defendant's answer made under oath. (Trans. 3.) This answer was ignored and the court summarily committed the defendant to the County Jail where she remained until June 24, 1933, when she was released upon a bail bond of \$2500.00. (Trans. 19.)

The minutes of the court, showing what transpired in court on June 19, 1933, are set out in the transcript from page 15 to the middle of page 16. These minutes show no hearing; on the contrary, they show that the court summarily found that defendant was guilty of contempt in failing to comply with the order of court dated May 22, 1933. (Trans. 15.)

The alleged report of the Special Master is referred to at pages 2, 7, 11, 12, 14 and 18 of the transcript, but it nowhere appears in any of the orders when this alleged report was made, nor is the same anywhere set out.

Therefore, there was no evidence offered showing that defendant had any of this alleged trust fund in her possession or under her control at any time, and the burden was upon plaintiff to prove by clear convincing evidence the guilt of defendant, as the alleged contempt was a constructive contempt if any contempt at all was committed.

In re Buckley, 69 Cal. 1.

A mere preponderance of the evidence is not enough.
Hotaling v. Superior Court, 191 Cal. 501.

In the order of May 22, 1933 (Trans. 1-2-3), it is recited that one W. E. Tucker, as Special Master, "to whom was referred, to take and state an account of certain trust passing into the hands of the defendant." Near the bottom of page 2 of the transcript the court finds this report to be true and correct, and the same is confirmed. Upon this alleged report of such Special Master, the court makes all the findings contained in the case, and without any other evidence being taken, the court finds the defendant guilty of contempt (Trans. 13) and summarily commits her to jail.

Before the alleged report of Tucker as Special Master could be made the basis for any finding, it must appear:

(a) That the reference was by the consent of the parties, or

(b) That the appointment of the Master was in an action pending on account of a dispute, it was a matter in which the court was empowered to make the appointment and refer the matter. Unless the

case is one in which a compulsory reference may be made, the consent of the parties must be shown.

Alexander Canal Co. v. Swan, 5 How. 83, 12 L. Ed. 60;

Philadelphia Cas. Co. v. Fechheimer, 220 Fed. 401.

A federal court has no authority to order a compulsory reference to hear and determine a common law action.

U. S. v. Wells, 203 Fed. 146;

Vermeula v. Reilly, 196 Fed. 226;

Swift v. Jones, 145 Fed. 489.

When we consider that the alleged report of the Special Master was the only evidence considered by the court, in order for that report to constitute sufficient evidence, all the jurisdictional features had to be recited and shown, otherwise it did not rise to the dignity of competent evidence.

This being a civil contempt, constructive in its nature, the burden was upon the plaintiff to establish by clear and satisfactory evidence that a contempt had been committed.

In re Buckley, supra.

Hotalling v. Superior Court, supra.

The record herein shows that this contempt proceeding was instituted by the plaintiff, as the affidavit of the attorney for the plaintiff shows. (Trans. 5.) The proceeding was wholly for the benefit of plaintiff to force the defendant to pay money to plaintiff.

Therefore, in order to warrant the court in finding the defendant guilty of contempt, the record must show that competent testimony was introduced to show that the alleged money was a trust fund and that the plaintiff was entitled to an order requiring the defendant to pay it to plaintiff.

On June 3, 1933, the defendant filed herein her answer to the order of May 22, 1933, to show cause, in which she specifically denies that she is possessed of any of the funds or that any part of it is under her control and also stating under oath that she is unable to comply with the order of May 22, 1933. (Trans. 3-4.)

In *Boyd v. Glucklich*, 116 Fed. at page 141 of the opinion, the 8th Circuit Court of Appeals, cited with approval the following:

“If one is brought in, in contempt, deny all upon oath, he is of course discharged of the contempt, but if he has foresworn himself, he may be prosecuted for perjury.”

Mr. Blackstone says:

“If the party can clear himself upon oath, he is discharged but if perjured, he may be prosecuted for perjury.”

“The doctrine thus laid down is still the rule followed by courts of common law; thus courts uniformly holding, that if one accused of a constructive contempt answers all the charges under oath, he must be discharged; the answer must, for the purpose of the contempt proceedings, be taken as true, and extrinsic evidence can not be

received to impeach it. And this is the doctrine of the Federal Courts.”

Judge Sanborn in his concurring opinion on page 142 in the same case does not agree that the answer is conclusive. However, on the same page, says:

“In all proceedings for contempt for the disobedience of orders in bankruptcy and in chancery, and in most of the states in all cases of proceedings for contempt for the disobedience of an order of court, the sworn answers of the party charged with contempt are evidence to perjure him thereof, but they are not conclusive evidence. They may be contradicted and supported by other testimony, and the question whether or not the party charged has purged himself of the contempt is always to be decided upon a careful consideration of all the evidence produced for and against him.”

From the foregoing it is clear that defendant's answer, denying that she was in possession or control of the money, is *evidence*. As far as the record herein discloses and as a matter of fact, no consideration was given to her answer and she was summarily committed to jail.

“Inability to comply with the command of the court is always a complete defense to a charge of contempt. It can not be imputed to any one that he is guilty of a contempt of court for neglecting or refusing to do what is out of his power to do. An order of commitment in such a case is void.”

Boyd v. Glucklich, supra, page 140;

In re Cowden, 139 Cal. 244.

Without considering the defendant's plea of inability to comply with the order, to commit her, is imprisonment for debt.

“A court of bankruptcy can not sentence a bankrupt to imprisonment for debt any more than other courts of the United States can do that thing; and what it can not do directly, it can not do by induction under another name. It can not lawfully order the bankrupt to deliver to the trustee money or property he has not in his possession or under his control and imprison him if he does not comply with the order. Plainly, that would be imprisonment for debt, and the order is not relieved of that illegal and odious quality ‘imprisonment for contempt’.”

Boyd v. Glucklich, 116 Fed. 136.

DEFENDANT'S ANSWER RAISED AN ISSUE.

Defendant filed her answer to the order of May 22, 1933 (Trans. 1), in which she denied having in her possession or under her control any of the alleged funds and also alleging under oath that she was unable to comply with the order of May 22, 1933. (Trans. 3.) This answer raised an issue that had to be tried and determined before defendant could be found guilty of any contempt.

“In a prosecution for constructive contempt the affidavits on which the citation is issued constitute the complaint. (Hutton v. Superior Court, 147 Cal. 156 (81 Pac. 409); Frowley v. Superior Court, 158 Cal. 220 (110 Pac. 817); Selowsky v. Superior Court, supra.) The af-

fidavits of the defendant constitute the answer or plea (*Mitchell v. Superior Court*, supra), and the issues of fact are framed by the respective affidavits serving as pleadings. (*In re Buckley*, 69 Cal. 1 (10 Pac. 69); *Mitchell v. Superior Court*, supra.) A hearing must be had upon these issues (*McClatchy v. Superior Court*, supra; *In re Buckley*, supra; Code Civ. Proc., sec. 1217), at which competent evidence must be produced. (*In re Buckley*, supra; *Goodall v. Superior Court*, 37 Cal. App. 723 (174 Pac. 924); Code Civ. Proc., secs. 1218, 1220.) The proceeding is of such a distinctly criminal nature that a mere preponderance of evidence is insufficient. (*In re Buckley*, supra.)”

Hotaling v. Superior Court, 191 Cal. 505.

THE AFFIDAVIT OF MARTIN J. DINKELSPIEL IS WHOLLY INSUFFICIENT TO SUPPORT AN ORDER FOR A CONTEMPT.

Martin J. Dinkelspiel, one of the attorneys for plaintiff, filed an affidavit as the basis for the contempt charged against the appellant (Trans. 5), to this affidavit there annexed an interlocutory order. (Trans. 7.) The charging part of this affidavit is on information and belief, not a single fact is upon the knowledge of affiant. Besides, said affidavit does not in any way show that appellant was able to comply with the order; nor do any of the orders recite or show such ability. True, the order of commitment (Trans. 10), recites that the report of the Special Master was returned and filed April 21, 1933 (Trans. 11), but appellant was committed June 19,

1933 (Trans. 14-15), being sixty days after the Special Master's report was filed, while the record is silent when this finding was actually and in fact made.

The whole record shows that it was a proceeding to pay money. An essential fact, in such cases, to be established is the ability of the person charged to make payment.

“The order of commitment should set forth that it is within the power of the party to comply.”

Ex parte Cohen, 6 Cal. 318.

“Every court being, in contempt proceedings, a court of strictly limited jurisdiction, it is essential to the validity of a judgment directing the imprisonment of a person until he complies with an order of the court, that it should be *found* that he is able to comply.”

Ex parte Silvia, 123 Cal. 294.

“And an order, adjudging one guilty of contempt for failure to perform an act directed by the court is void as a basis for the imposition of punishment, unless it appears therefrom that it is within the power of such person to perform the act (*Bakeman v. Superior Court*, 37 Cal. App. 785), and a mere recital in the order that obedience thereto is wilfully refused is not sufficient.”

In re Cowden, 139 Cal. 244;

Van Hoosier v. Railroad Commission, 189 Cal. 233.

We ask that the order appealed from herein be reversed and that appellant be discharged from custody.

Dated, San Francisco,
February 23, 1934.

Respectfully submitted,
THOMAS F. McCUE,
Attorney for Appellant.

No. 7306

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

ETHLYN B. CLEMENTS, individually
and as administratrix of the estate
of Ralph L. Clements, also known
as R. L. Clements, deceased,

Appellant,

VS.

GEORGE W. COPPIN, as Trustee in
Bankruptcy of the estate of the
Flintex Corporation, a corporation,

Appellee.

BRIEF FOR APPELLEE.

DINKELSPIEL & DINKELSPIEL,
*Attorneys for Appellee, George W. Coppin,
as Trustee in Bankruptcy of the Flintex
Corporation.*

FILED

MAR 22 1934

PAUL P. O'BRIEN,

CLERK

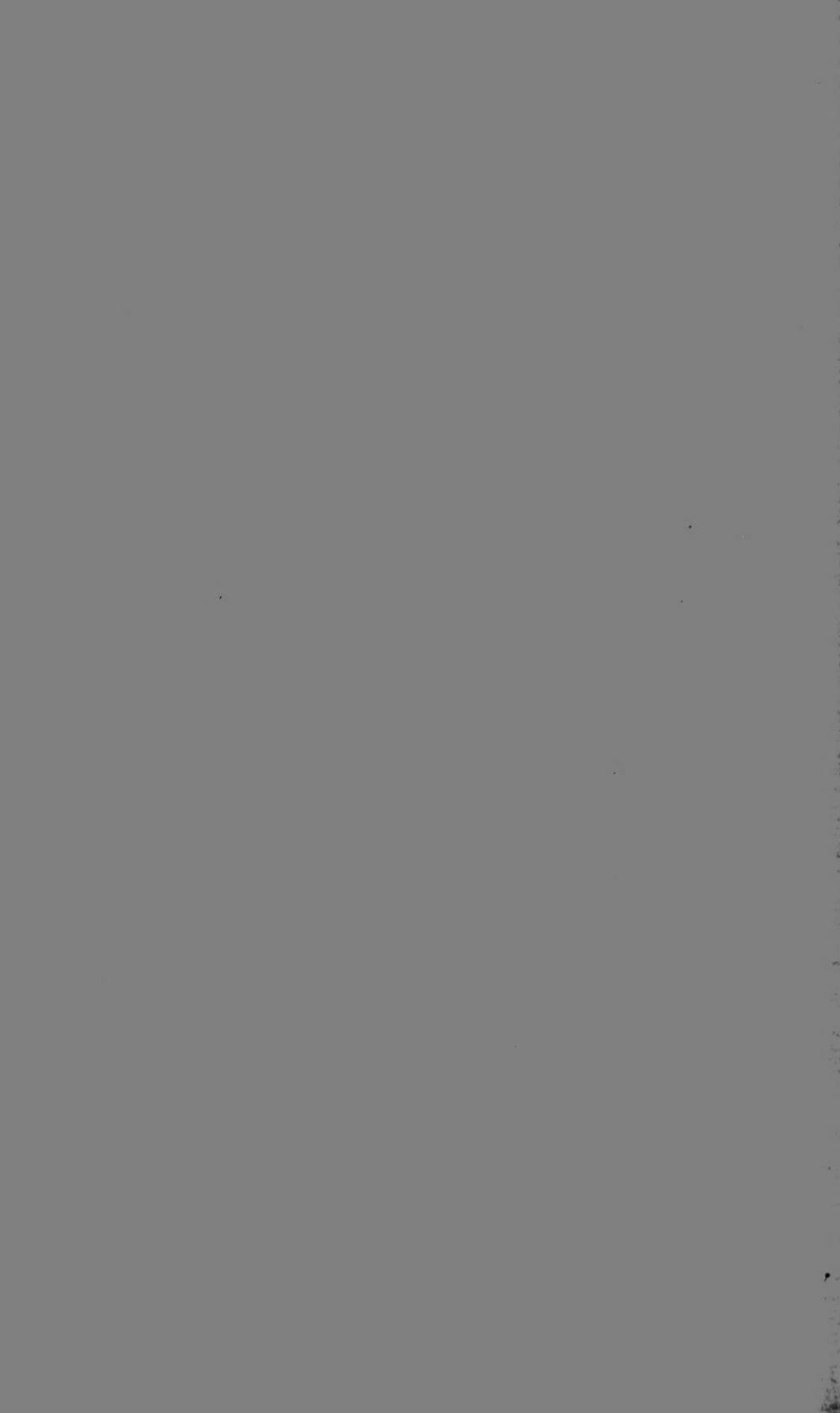


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No. 7306

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

ETHLYN B. CLEMENTS, individually
and as administratrix of the estate
of Ralph L. Clements, also known
as R. L. Clements, deceased,

Appellant,

vs.

GEORGE W. COPPIN, as Trustee in
Bankruptcy of the estate of the
Flintex Corporation, a corporation,

Appellee.

BRIEF FOR APPELLEE.

Statement of Case.

This is an appeal from an order of imprisonment and commitment for civil contempt by reason of the refusal of appellant to pay over to the Clerk of the above entitled Court for the benefit of appellee as Trustee of the Flintex Corporation, bankrupt, certain trust funds, the property of the bankrupt, in her possession and under her control in disobedience of a turn over order. (R. 1-3).

The main case from which the contempt proceedings issued was an action in equity to fasten a trust upon certain funds of said Flintex Corporation which wrongfully and fraudulently came into the hands of appellant in part as an individual and in part as administratrix of the estate of her deceased husband, Ralph L. Clements.

The case was tried twice, each time resulting in a decree in favor of appellee, creating an involuntary trust as to said funds and granting a reference for an accounting to W. E. Timber, Esq., as Special Master. An appeal was taken to this Court from each of said decrees, the first was reversed upon jurisdictional grounds which objection was removed prior to the second trial. (*Matthew v. Coppin*, 32 Fed. (2) 100). The decree from which the second appeal was taken was affirmed. (*Clements v. Coppin*, 62 Fed. (2) 552).

On the 21st day of April, 1933, the Special Master filed a report in which he found that \$22,500.00 of said trust funds passed into the hands of appellant as an individual, and that of said sum there was \$11,979.00 in her possession and control; that \$7,259.12 of said trust funds passed into her hands as administratrix of the estate of her deceased husband, and that \$4,805.20 of said sum was in her possession and under her control. (R. 1-3; 10-14).

No objections or exceptions were reserved by appellant as against said report, and on the 22nd day of May, 1933, upon hearing, the United States District Court adopted and confirmed the report of said

Special Master and issued the turn over order in question, dated May 22nd, 1933, directing appellant to turn over said trust funds to the Clerk of said United States District Court within ten days from the date of service of said order upon appellant. (R. 1-3).

Upon the termination of said ten days, and on June 3rd, 1933, appellant filed a purported answer to said turn over order of May 22nd, 1933, denying possession or control of said trust funds. (R. 3-4). The appellant failing to comply with said turn over order within the time indicated therein, or at all, the Court issued an order directing appellant to appear upon a day certain, to-wit: the 19th day of June, 1933, and show cause why she should not be adjudged guilty of contempt for failure to comply with said order. (R. 8-10). Said order to show cause came on for hearing on said return day, and appellant with her counsel appeared and made an informal motion for a re-reference to the Special Master to re-open the hearing before said Special Master and to permit her to present evidence which she had failed to do before the making of said turn over order. (R. 16-19). Neither the character of the evidence sought to be introduced before the Special Master was revealed, nor was any reason assigned why such evidence was not presented to the Special Master prior to the turn over order and during the hearing before him.

The motion was denied, to which no exception was taken. No affidavit, or any other paper, was filed by appellant in answer to said order to show cause, nor

was any testimony or other evidence offered by appellant showing inability to comply with the said turn over order by reason of any cause or causes arising after the issuance of said turn over order. Nor were any exceptions reserved as against any of the proceedings taken on said order to show cause by appellant.

Upon the failure to present any evidence as above indicated the Court made the order, adjudging her to be guilty of contempt and remanded her to the custody of the United States Marshal to be confined in the County Jail of the City and County of San Francisco, until she complied with said turn over order. (R. 10-15).

Argument.

I.

NO CLAIMED IRREGULARITY IN THE CONTEMPT PROCEEDINGS ON THE ORDER TO SHOW CAUSE IN THE COURT BELOW HAS BEEN SAVED FOR REVIEW IN THIS COURT BY APPELLANT.

None of the rulings of the United States District Court in the contempt proceedings were excepted to by appellant, and any assignments of error based upon said rulings is not subject to review in this Court.

Matheson v. U. S., 227 U. S. 540;

Palmer v. U. S., 6 Fed. (2) 145;

Gruher v. U. S., 55 Fed. 474.

In *Edwards v. U. S.*, 7 Fed. (2) 357, at page 358, the Court said:

“None of the assignments of error raised questions based on rulings of the trial court duly excepted to. This court has repeatedly held that such assignments are unavailing.”

Procedural questions cannot be raised for the first time on appeal.

Collins v. Traeger, 27 Fed. (2) 842, 843 (9th Circuit).

And in accordance with the rules which govern the hearing and consideration of causes on appeal the appellate court will limit review in contempt cases to issues and matters properly presented and passed on by the trial court *and saved for review by proper exceptions seasonably made*.

Fairfield, et al. v. U. S., 146 Fed. 508;

Reeder v. Morton-Gregson Co., 296 Fed. 785.

There is therefore nothing for review before the appellate court relating to said contempt proceedings.

II.

IN THE ABSENCE OF A TRANSCRIPT OF THE CONTEMPT PROCEEDINGS THEIR REGULARITY AND CORRECTNESS WILL BE PRESUMED BY THE APPELLATE COURT.

Dunham v. U. S. ex rel. Kansas City Southern Ry. Co., 289 Fed. 376, 379.

Wholly apart from the question as to whether the rulings of the trial court in the contempt proceedings

can be assigned as error in view of the failure of appellant to save her exceptions, the bald statement that she was not afforded an opportunity to be heard finds no support in the record. Both the express language of the minute order, (R. 15) and the statement of the Court (R. 16-19) show she was given full opportunity to be heard in said contempt proceedings.

However, if as appellant contends, the statement of the trial court has no place in the record, notwithstanding her consent as evidenced by the stipulation of appellee at the end of said statement, (R. 20) then in the absence of a transcript of the contempt proceedings the regularity, correctness and validity of said proceedings must as previously indicated be conclusively presumed.

III.

THE ATTEMPTED DEFENSE OF APPELLANT AT THE HEARING ON THE CONTEMPT PROCEEDINGS WAS A COLLATERAL ATTACK ON THE TURN OVER ORDER OF MAY 22ND, 1933, AND THEREFORE UNAVAILING.

No exceptions were taken as against the report of the Special Master, or appeal taken from the turn over order, the findings of the Special Master are therefore not open to review by this Court. It must be conclusively presumed that the evidence fully supports said report.

Thompson Mach. Co. v. Sternberg, 55 Fed. (2) 715, 718;

Bourne v. Perkins, et al., 42 Fed. (2) 94, 97;

Rust v. MacLaren, 29 Fed. (2) 288, 290.

The statement of the Court (R. 16-19) will clearly show an attempt on the part of the appellant to go behind the turn over order.

She appeared at the hearing on the contempt proceedings with her counsel and informally moved for a re-reference to the Special Master with the avowed purpose of re-opening said accounting and introducing further alleged evidence which she admittedly failed to present during the said accounting before said Special Master prior to the making of said turn over order of May 22nd, 1933. No reason was assigned why said pretended evidence was not seasonably presented, nor was the purport of it revealed, and neither was there any suggestion, nor any attempt to introduce any evidence tending to prove that her alleged inability to comply with the turn over order arose subsequent to said turn over order.

It will be observed her purported answer (R. 3-4) to said turn over order, an anomaly in the law, is not based upon inability arising after the making of the turn over order, but by inability existing at the time said turn over order was made.

The law is well established that said turn over order may not be collaterally assailed and that the only evidence the Court could entertain on the contempt proceedings was evidence of inability to comply with the said turn over order from causes arising subsequent to the making of said order.

Thus in *Oriel v. Russell*, 278 U. S. 358, 73 L. ed. 419, a turn over order was made, directing the bankrupts

to turn over certain books to the Trustee which they failed to do. On the motion to commit for failure to comply with said order, the bankrupts sought to introduce evidence on the issue whether the books had been in their possession or under their control at the time of said turn over order. The Referee and the District Court refused to re-try that issue on the ground that the turn over order could not be collaterally attacked. On petition in certiorari, the Supreme Court, in connection with said turn over order said at page 424 L. ed.:

“Being made, it should be given weight in the future proceedings as one that may not be collaterally attacked by an effort to try over the issue already heard and decided at the turn over. Thereafter on the motion for commitment the only evidence that can be considered is the evidence of something that has happened *since* the turn over order was made, showing that *since* that time there has newly arisen an inability on the part of the bankrupt to comply with the turn over order.” (Italics ours.)

In *Sarkes v. Wells*, 37 Fed. (2) 339, no appeal was taken from the turn over order. On page 340 it was said:

“The only defense open to the bankrupt here upon the contempt proceedings was that something had occurred since the order which rendered him unable to obey it. Oriel, Russell, supra. He made no such defense. He contented himself with denying that he had had possession or control of the property either *before or after* the

turn over order and asserting that it was therefore impossible for him to turn over that which he had never possessed. This insistence was not relevant to the issue in the contempt proceedings. It was an indirect attempt to annul the turn over order, which may not be collaterally attacked, and which within itself constituted a prima facie case against the bankrupt in the contempt proceedings." (Italics ours.)

IV.

THE BURDEN OF PROOF WAS UPON THE APPELLANT NOT ONLY TO SHOW INABILITY TO TURN OVER SAID TRUST FUNDS BUT THAT SUCH INABILITY AROSE AFTER THE TURN OVER ORDER.

Appellant complains that the report of the Special Master has not been made a part of the record on the appeal, and that therefore there was no evidence offered showing appellant had any of said trust funds in her possession or control at any time, and that the burden of proof was on appellee to show it by clear and convincing evidence.

It seems obvious that appellant has no clear conception of the issues involved. Assuming that the sufficiency of the evidence to support the findings of the Special Master were properly assigned as error, which presupposes the reservation of proper exceptions below, still it would be the duty of appellant to bring up, not only the report of the Special Master, but a transcript of the evidence upon which the report was

based and point out to this Court wherein the evidence is insufficient, otherwise in their absence all inferences and presumptions as to regularity and sufficiency will be indulged by the appellate court.

However, it has already been observed that the issue above mentioned is not before this Court for review and that the findings of the Special Master as adopted and confirmed by the District Court, to the effect that appellant had possession and control of said trust funds at the time of the turn over order is conclusive upon this Court, and the only escape from the consequences of her failure to obey said turn over order was a satisfactory showing in the trial court on the contempt proceedings that she was unable to comply with said turn over order due to causes arising subsequent to said order, and the burden of proof is upon her. Thus in *Oriel v. Russell*, supra, at page 425, L. ed., the Supreme Court quoting with approval from *Re Epstein*, 206 Fed. 568, said:

“In the case in hand, the consequence is that, as the order to pay or deliver stands without sufficient reply, it remains what it had been from the first—an order presumed to be right, and therefore an order that ought to be in force. In the pending case, or in any other the court may believe the bankrupt’s assertion that he is not in possession or control of the money or the goods, and in that event the civil injury is at an end; but it is also true that the assertion may not be believed; and the bankrupt may therefore be subjected to the usual pressure that follows wilful disobedience of a lawful command, namely, the inconvenience of being restrained of his liberty.”

On the same page the Court continues:

“In the two cases before us, the contemnors had ample opportunity in the original hearing to be heard as to the fact of concealment, and in the motion for the contempt to show their inability to comply with the turn over order. *They did not succeed in meeting the burden which was necessarily theirs in each case, and we think, therefore, that the orders of the Circuit Court of Appeals in affirming the judgments of the District Court were the proper ones.*” (Italics ours.)

Appellant presented no evidence to the effect that her alleged inability arose after the turn over order, and there is no pretense to that effect, indeed, she sought to go behind the turn over order and show inability prior to the making of said turn over order.

V.

IN ORDER TO CONTROVERT THE PROPRIETY OF A REFERENCE TO A SPECIAL MASTER IN CHANCERY, A MOTION FOR REVOCATION SHOULD BE SEASONABLY MADE TO THE COURT WHICH GRANTED THE REFERENCE. A FAILURE TO MOVE FOR SUCH REVOCATION AT OR NEAR THE TIME OF THE GRANTING OF THE REFERENCE IS EQUIVALENT TO ACQUIESCENCE.

Flanders v. Coleman, 249 Fed. 757, 759;
Smith v. Brown, 3 Fed. (2) 926.

In the case last cited the Court said:

“It must be said that the defendant acquiesced in the order of reference, or, in the absence of objection, the court had the right to assume that

the reference was agreeable to the parties. *Not until the Master was proceeding to take the testimony was there any objection to such course, and even then it was presented to the Master, and not to the court.* That was neither the time nor the place to initiate or to interpose the objection.” (Italics ours.)

Moreover, the question as to the propriety of the reference is one of discretion with the Court, and in which the Court has a large and liberal discretion.

Bothwell Co. v. Bice, 247 Fed. 60, 64;

Holt Mfg. Co. v. Best Traction Co., 245 Fed. 354, 355.

VI.

THE COMMON LAW RULE THAT A DENIAL UPON OATH PURGES THE CONTEMPT DOES NOT OBTAIN IN THE FEDERAL COURT.

The old common law rule which made it optional with the accused to submit to a charge of perjury rather than contempt by false oath has never been applied by the Federal Courts.

Sweepston v. U. S., 251 Fed. 205;

U. S. v. Huff, 206 Fed. 700.

VII.

COMMITMENT UPON FAILURE TO TURN OVER TRUST FUNDS BY ORDER OF COURT IS NOT IMPRISONMENT FOR DEBT.

“Where the order of court directs the surrender to the proper officer of property in respect

to which the court has jurisdiction, the obligation and duty of the person to whom it is directed to surrender cannot be converted into a debt by his mere refusal to comply with the order. The commitment for disobedience of an order directing that property belonging to the bankrupt estate be delivered to the Trustee, is not a punishment for nonpayment of a debt. There is no debt due the Trustee. The punishment is inflicted for the failure to perform a legal duty."

Collier on Bankruptcy, 13th ed., Vol. 1, p. 89, sec. b, and authorities cited.

VIII.

THE AFFIDAVIT OF MARTIN J. DINKELSPIEL WAS SUFFICIENT TO SUPPORT THE ORDER TO SHOW CAUSE FOR CONTEMPT.

An affidavit in support of an order to show cause may be based upon information and belief.

Employers' Teaming Co. v. Teamsters' Joint Council, et al., 141 Fed. 679, 686.

The affidavit averred on information and belief that appellant had not complied with the turn over order. There has been at no time any pretense that she had complied with such order, and at the contempt hearing the Court found upon satisfactory proof that she did not.

It is next asserted her ability to pay over said funds should have been set forth in the order of commitment. It is submitted that the order of imprison-

ment and commitment contains language showing her ability to comply with said order. The findings of the Special Master as adopted and confirmed by the Court are set forth in said order. The findings of the Special Master found that she had said trust funds in her possession and under her control at the time of the turn over order which conclusively implies she then had the ability to comply with said turn over order. No evidence was presented by her at the hearing on the contempt proceedings in proof of any change of circumstances after the turn over order. Her ability to comply with said order must therefore be presumed to have continued.

In *Oriel v. Russell*, supra, lack of possession and control were construed in effect as inability to comply with the turn over order. There it will be recalled the Court refused to allow the bankrupt to present evidence showing no possession or control at the time of the turn over order on the ground it constituted a collateral attack on said order.

That possession or control is equivalent to ability to comply with an order directing a turn over of property or funds is well established.

In re Adler, 129 Fed. 502;

In re Wilson, 116 Fed. 419.

In *In re George P. Rosser*, 101 Fed. page 562, at page 566, the Court said:

“But, it appears to the satisfaction of the Referee for the Court that property of the bankrupt estate is in control or possession of the bankrupt, a lawful order for its delivery to the Trustee may

be made, and a refusal to obey this order may be punished as a contempt of court, both under the general law relative to contempt and under the specific provisions of the Bankruptcy Act.”

In *Collier on Bankruptcy*, 13th ed. at pp. 993 and 994, the author, supported by a large number of authorities, said:

“Property of a bankrupt estate, traced to the recent control or possession of the bankrupt, *or a third person* is presumed to remain there until he satisfactorily accounts to the court for its disposition or disappearance, and that he cannot escape an order for its surrender by simply denying under oath that he has it, or that it is the property of the bankrupt estate; it is still the duty of the Referee and of the court, if satisfied that such property is in his possession or under his control, to order him to surrender it to the Trustee and to enforce said order by confinement as for contempt.” (Italics ours.)

Conclusion.

The brief of appellant is but a transparent attempt to delay the inevitable. It marks the close of a stubborn and protracted resistance to the payment over of trust funds to their rightful owner found to be in the possession and under the control of appellant.

The complaint of appellant that the report of the Special Master is not before this Court cannot be seriously considered. She could have made it a part of the record on appeal had she so desired. Indeed,

a diminution of the record will show appellee sought to bring up the entire proceedings taken before the Special Master to which appellant filed and urged written objections, which were sustained by the trial court on the theory that the findings of the Special Master were not open to review on this appeal.

Again, the charge that the commitment of appellant was ordered without a hearing on the order to show cause is as groundless as it is absurd. As previously shown the findings of the Special Master and the turn over order of the Court, unchallenged, found in her possession and under her control the sum of \$16,784.20, a part of \$29,759.12, trust funds that wrongfully came into her possession, the property of the Bankrupt, and the difference of which she apparently squandered. Having failed to except to the findings of the Special Master, or to appeal from the turn over order, she was limited at the hearing of the order to show cause to show inability to perform the turn over order by reason of causes arising *subsequent* to said order, and the burden of proof was upon her which she failed to meet, offering no evidence at all. The Court under the circumstances had no other alternative, although it was at all times generously considerate of appellant's rights.

The fear of going beyond the record restrains appellee from going into the history of the case to afford the Court a proper and an illuminating perspective.

It is submitted in conclusion that there is no merit to this appeal and that the order appealed from be affirmed to the end that appellant be obliged upon pain of imprisonment to restore trust funds to their owner, said bankrupt corporation, found to be in her possession and control.

DINKELSPIEL & DINKELSPIEL,
*Attorneys for Appellee, George W. Coppin,
as Trustee in Bankruptcy of the Flintex
Corporation.*



No. 7306

IN THE

United States Circuit Court of Appeals

For the Ninth Circuit

ETHLYN B. CLEMENTS, individually and as
administratrix of the estate of Ralph L.
Clements, also known as R. L. Clements,
deceased,

Appellant,

vs.

GEORGE W. COPPIN, as trustee in bank-
ruptcy of the estate of the Flintex Cor-
poration (a corporation),

Appellee.

APPELLANT'S REPLY BRIEF.

Upon Appeal from the District Court of the United States
for the Northern District of California,
Southern Division.

THOMAS F. McCUE,

625 Market Street, San Francisco,

Attorney for Appellant.

FILED

APR 5 - 1934

PAUL P. O'BRIEN,

CLERK



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On the oral argument of this case, this honorable court asked me whether I would advise my client to pay the money as ordered by the trial court. I answer that I have advised her to pay it, but she assures me that she has no money, and she tells me that she had no part of this money at the time of the hearing to show cause. I have also advised her if there is any way she can borrow or raise the money

to do so. Again she assures me that it is impossible for her to do so.

Appellant is in an unfortunate situation, in this; she received this money in 1927 by order of distribution from the administrator of Clements' estate prior to any notice of plaintiff's claim; she invested it in stocks and in the crash of 1929, she was wiped out. The report of the Master should have been excepted to and the whole matter brought before the trial court, which was not done. I was not her attorney in those proceedings.

If this case is affirmed, Mrs. Clements will have to go to jail for life, unless some other relief is granted.

We are not attacking the turnover order, because an attack here would be a collateral attack on that order.

We have but two contentions in this case (a) That her verified answer (Trans. 3) presented an issue at the time of the hearing to show cause, upon which she was not accorded a hearing, (b) The order of commitment (Trans. 10) is void for the want of a finding therein that at that time she was able to perform and pay the money.

In addition to the case cited in the brief for the appellant, we cite:

“It follows unquestionably that an order imprisoning a bankrupt for contempt for failure to obey a decree to pay money or surrender goods into court, is erroneous as a matter of law, where the bankrupt by a sworn answer denies that he

has the money or goods, and it does not *appear clearly and affirmatively from the record*, notwithstanding his denials, that he has the power to comply with the decree." (Italics ours.)

In re Cole, 163 Fed. 189.

The record in this case nowhere shows, clearly or affirmatively, that at any time, appellant was able to pay over this money.

In the case of *Cooper v. Dasher*, 78 L. Ed. 31, there is no question involved in regard to the inability or power of the defendant to perform and no question is raised as to existence of the goods. The only contention of the defendant in that case was that the turnover order was so indefinite that the goods could not be identified. The Supreme Court held that description in the order, "gives the only description that the nature of the case allows". It is clear that the only point involved or decided, was the sufficiency of the description of the goods in the turnover order. The case is not in point on the questions involved in the instant case.

In *Oriel v. Russell*, 278 U. S. 358, 73 L. Ed. 419, Chief Justice Taft said (second column L. Ed., p. 425):

"Where it has failed and where a reasonable interval of time has supplied the previous defect in the evidence, and has made sufficiently certain what was doubtful before, namely the bankrupt's inability to obey the order, he has always been released, and I need hardly say that he would always have the right to be released, as soon as the fact becomes clear that he cannot obey."

This is all we ask in this case. Appellant had no opportunity to show her inability to obey. This is shown by the minutes of the court (Trans. 15) and the court's statement. (Trans. 16.) The fact that she served six days in jail is evidence that she was unable to pay. (Trans. 19.) It may be said that counsel, who then represented appellant was lax in not insisting upon a hearing, but in our opinion, that does not militate against the justice of her plea to be released from serving in jail when she is in truth and in fact unable to pay the money.

However, the report of the Special Master is not before this court and therefore, there is no evidence in the case as to what the findings of the Master were. The only thing in the record are the recitals contained in the turnover order. (Trans. 7.) To say the least, the evidence is not clear and convincing, as Judge Taft says in the *Oriel* case:

“We think a proceeding for a turnover order in bankruptcy is one the right to which should be supported by clear and convincing evidence.”

We respectfully ask that the case be reversed to the end that she be accorded a hearing upon her sworn answer and on her inability to perform.

Dated, San Francisco,

April 4, 1934.

Respectfully submitted,

THOMAS F. McCUE,

Attorney for Appellant.

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This brief is filed with consent of the court, and supplements briefs herein by Thomas F. McCue, Esq., associate counsel for appellant.

RESUME OF FACTS.

1. Pay over order of District Court, dated and filed May 22, 1933. (Tr. 1-3.)

The main case from which the contempt proceedings issued was an action in equity to fasten a trust upon certain funds of said Flintex Corporation which wrongfully and fraudulently came into the hands of appellant in part as an individual and in part as administratrix of the estate of her deceased husband, Ralph L. Clements.

The case was tried twice, each time resulting in a decree in favor of appellee, creating an involuntary trust as to said funds and granting a reference for an accounting to W. E. Turner, Esq., as Special Master. An appeal was taken to this Court from each of said decrees, the first was reversed upon jurisdictional grounds which objection was removed prior to the second trial. (*Matthew v. Coppin*, 32 Fed. (2) 100). The decree from which the second appeal was taken was affirmed. (*Clements v. Coppin*, 62 Fed. (2) 552).

On the 21st day of April, 1933, the Special Master filed a report in which he found that \$22,500.00 of said trust funds passed into the hands of appellant as an individual, and that of said sum there was \$11,979.00 in her possession and control; that \$7,259.12 of said trust funds passed into her hands as administratrix of the estate of her deceased husband, and that \$4,805.20 of said sum was in her possession and under her control. (R. 1-3; 10-14).

No objections or exceptions were reserved by appellant as against said report, and on the 22nd day of May, 1933, upon hearing, the United States District Court adopted and confirmed the report of said

Special Master and issued the turn over order in question, dated May 22nd, 1933, directing appellant to turn over said trust funds to the Clerk of said United States District Court within ten days from the date of service of said order upon appellant. (R. 1-3).

Upon the termination of said ten days, and on June 3rd, 1933, appellant filed a purported answer to said turn over order of May 22nd, 1933, denying possession or control of said trust funds. (R. 3-4). The appellant failing to comply with said turn over order within the time indicated therein, or at all, the Court issued an order directing appellant to appear upon a day certain, to-wit: the 19th day of June, 1933, and show cause why she should not be adjudged guilty of contempt for failure to comply with said order. (R. 8-10). Said order to show cause came on for hearing on said return day, and appellant with her counsel appeared and made an informal motion for a re-reference to the Special Master to re-open the hearing before said Special Master and to permit her to present evidence which she had failed to do before the making of said turn over order. (R. 16-19). Neither the character of the evidence sought to be introduced before the Special Master was revealed, nor was any reason assigned why such evidence was not presented to the Special Master prior to the turn over order and during the hearing before him.

The motion was denied, to which no exception was taken. No affidavit, or any other paper, was filed by appellant in answer to said order to show cause, nor

mitting her to jail are both void for the following reasons:

1. Affidavit upon which the order to show cause was based is defective.
2. No hearing was had on the issue raised by the verified answer of defendant to the pay over order.
3. District Court did not afford defendant her constitutional right to be heard.
4. Decrees of District Court do not contain findings.
5. Decrees do not show defendant's ability to comply with the turn over order. The answer of defendant stands unchallenged and is a complete answer to order to show cause.
6. Decrees are in effect an imprisonment for debt.

ARGUMENT.

I.

AFFIDAVIT DEFECTIVE.

The affidavit upon which the order to show cause was based was made by Martin Dinkelspiel, attorney for plaintiff. (Tr. 5-6.)

The affidavit recites the making of the pay over order, and alleges on information that defendant has disobeyed said order and failed and refused to pay over to the clerk of the court the funds mentioned in said order; wherefore the affidavit prays for an order directing defendant to show cause why she should not

be adjudged guilty of contempt for failure to comply with said order.

Said affidavit was filed subsequent to the making and filing of the verified answer of defendant denying that she had in her possession or under her control the funds mentioned in said pay over order, or any part of such funds, and that she was accordingly unable to comply with said order. Plaintiff and appellee thus had full knowledge of the position of defendant, and completely ignored her answer in framing such affidavit. In any event such affidavit in order to support a judgment of contempt must allege that defendant *is able to comply* with the order, and particularly so here where defendant's answer was on file. Furthermore, said affidavit asks merely for an order to show cause why defendant should not be adjudged guilty of contempt. No punishment for contempt is asked.

In *Berger v. Superior Court*, 175 Cal. 719, 720, Chief Justice Angellotti, in delivering the opinion of the court, said:

“It is thoroughly settled in this State that the affidavit by which a contempt proceeding is instituted, in order to sufficiently support an adjudication of contempt, must state facts constituting the offense. It is the complaint in such a case, and if defective in that respect, the adjudication cannot stand.”

The affidavit did not state facts constituting the offense, for there could be no offense without ability to perform, and the affidavit contains no allegation of such ability. Nor can a court grant relief not asked

for in the prayer of the complaint, the affidavit here. Yet the court committed the defendant for contempt.

The court in *In re Cole*, 163 Fed. 180, 186, says:

“The great fullness with which we have explained this proceeding, and the practice in regard thereto, will be found to have been necessary. For example, the petition on which Mrs. Cole was ordered by the District Court to be incarcerated is only such as would be required for ordinary supplemental proceedings for recovering a debt. It shows only that Mrs. Cole had been ordered to pay and had not. It contains no allegation that her failure to pay was wilful, nor anything to show that it was not caused by mere inability. Applying strict rules, this, of course, would not be sufficient to put her on the defensive.”

II-III.

NO HEARING HAD ON ORDER TO SHOW CAUSE. COURT DID NOT AFFORD DEFENDANT CONSTITUTIONAL RIGHT TO BE HEARD.

On the hearing of the order to show cause an issue was presented by defendant's verified answer. (Assuming for argument that affidavit of plaintiff was sufficient.)

At such hearing the only evidence before the court was said answer. Appellant maintains that not only was no further evidence offered, but that appellant had no opportunity to offer further evidence. This is shown in effect by the minute order of the court (Tr. 15-16), prepared *at the time*.

Three months after said hearing a statement of the court on the hearing to show cause was filed, wherein it is said (Tr. 18):

“The court denied the motion for a reference, no further evidence of any character being offered by defendant, nor heard by the court in behalf of either party.”

Defendant’s answer is therefore the only evidence in the record and it stands unassailed.

No citations are needed on the point that a court cannot go outside of the record to find facts and conclusions of the law upon which to base a decree.

The court in *Moody v. Cole*, 148 Fed. 295, 297, said:

“The courts have held with great clearness that the power of commitment should be cautiously exercised, and only when its propriety is beyond reasonable doubt. * * * The courts of bankruptcy have also held that the answer of the respondent to the rule to show cause is not conclusive, but traversable; that weight should be given to the denial of the bankrupt, but that *it is the duty of the court to examine all the evidence, both circumstantial and direct, relating to the matter.*” (Italics ours.)

The court below did not examine *any* evidence, much less “*all the evidence * * * relating to the matter.*” There was *an issue before the court*—whether or not defendant had *the ability* to comply with the turn over order. But the court disregarded the issue, received no evidence (except the answer of defendant) and made its orders arbitrarily.

At the hearing of the order to show cause counsel for defendant made a motion for a rereference of the matter to the master. No court reporter was present at the hearing. Said motion for rereference was promptly denied, and without giving counsel an opportunity to be heard further, and without permitting defendant herself to be heard, the court immediately ordered defendant committed into the care of the U. S. Marshal, the orders and decrees being signed and filed later.

The court must *try* the question of contempt. (See *In re Cole*, 163 Fed. 180, 184-5.)

In *Boyd v. Glucklich*, 116 Fed. 131, at pages 134-5, the court say:

“The alleged contempt in this case was not committed in the presence of the court, and is therefore what the law denominates a ‘constructive contempt.’ It is a criminal offense for which the punishment may be imprisonment without limit of duration, and one charged with it has the same inalienable right to be heard in his defense that he would if charged with murder or any other crime. (Cases cited.) In *Ex parte Robinson*, 19 Wall. 505, 22 L. Ed. 205—a proceeding to punish for contempt—the supreme court said:

“There may be cases, undoubtedly, of such gross and outrageous conduct in open court on the part of the attorney as to justify very summary proceedings for his suspension or removal from office; *but even then he should be heard* before he is condemned. The principle that there must be citation before hearing, and hearing or opportunity of being heard before judgment, is essen-

tial to the security of all private rights. Without its observance, no one would be safe from oppression wherever power may be lodged.'

And this was said in a case where the alleged contempt was committed in the presence of the court."

IV.

DECREES OF DISTRICT COURT LACK FINDINGS.

No record of the facts found by the master are before this court, nor is the master's report.

A court has no right to adjudge a party to be in contempt of court without making findings of fact showing as a matter of law that the party accused is in fact guilty of contempt.

The court in *Samel v. Dodd*, 142 Fed. 68, 73, said:

"It follows unquestionably that an order imprisoning a bankrupt for contempt for failure to obey a decree to pay money or surrender goods into court is erroneous as a matter of law, where the bankrupt by sworn answer denies that he has the money or the goods, and it does not appear clearly and affirmatively from the record, notwithstanding his denials, that he has the power to comply with the decree."

The above case was quoted with approval in *In re Cole*, 163 Fed. 180, 189.

In the decree entitled "order of imprisonment" (Tr. 10), there are recitals that in his report the *special master found* certain moneys had passed into the hands of the defendant, and that a certain part

of such moneys “remain in her hands and *unaccounted for.*” This is not a finding by the District Court, nor is it a finding of fact. Even if it could be considered a finding of fact by the court, still there is no finding as to *when* the funds remained in defendant’s hands, or whether she *now* has them and is *able* to comply with a turn over order. There are actually no facts in the record relating to the accounting. The only evidence before the court on the hearing of the order to show cause was the verified answer of defendant.

In *In re Cole*, 163 Fed. 180, at page 188, the court say:

“Notwithstanding the combined judgment of both the learned judge of the District Court and the referee which, of course, in accordance with the decisions, should have great weight on a question of fact like this, we find that there was in fact not sufficient evidence of the kind which the law requires on the exact issue pending here; that is to say, whether Mrs. Cole willfully refused to pay over moneys which it was necessary to show that she could pay over at the specific date to which the orders of the court properly related. Under the rules which touch petitions of this character, which permit only revision in matter of law, we could not interfere with the decree of the District Court of March, 1905, because, under the circumstances, we would not be justified in declaring that there was not sufficient to permit the District Court to pass on the question whether, as a result of collusion between Mrs. Cole and her husband, a mere debt according to the rules of civil procedure might not have been established against both her and her husband, or either of them; *but*

when it comes to the proposition that, at any specific date or time to which the proceedings might refer, Mrs. Cole had so completely under her control funds which she could command that her failure to command them was a willful contempt of the court, or when it comes to the issue that funds might not have been squandered, or even wrongfully disposed of by sending them to her husband's brother, or in some other way, there is such failure of proof that even the determination of the District Court cannot supply it." (Italics ours.)

In *Boyd v. Glucklich*, 116 Fed. 131, at page 140, the court say:

"The ability of a bankrupt to comply with the order of the court must be made to appear, before he can be punished for contempt. And it must be made to appear by evidence which leaves no reasonable doubt in the mind of the court on that subject. Evidence which is merely persuasive will not suffice. He cannot be imprisoned for the purpose of exploitation." (Italics ours.)

In *In re Rogowski*, 166 Fed. 165, it was held that, if it is impossible to point to any particular property or money, and definitely and specifically locate it, contempt proceedings are not justified.

Decree must contain findings of fact.

Oates v. United States, 223 Fed. 1013;

Terminal R. R. v. United States, 266 U. S. 17,
69 L. Ed. 150, 155.

V.

ABILITY TO COMPLY WITH TURN OVER ORDER.

Nowhere, in the decree or in the record, is the question of the ability of defendant to comply with the turn over order determined *or even considered or mentioned*.

In *Boyd v. Glucklich* (supra), pages 138-9, the court quote with approval and say:

“ ‘By that order it is adjudged that the defendant has within his control \$10,000 in money, of the proceeds of the goods of the defendant firm, and he is required to pay over that sum to the receiver immediately. The defendant denied absolutely that he has either property or money of the firm within his power or knowledge. There is no direct evidence that his denial is not true. The court’s conclusion seems to rest exclusively upon the inference that, because the defendant firm had a large amount of property some two years ago, the defendant has it now. This is hardly a satisfactory basis for so severe a proceeding. The experience of business men shows that such a conclusion is often a very violent non sequitur from such premises. The logical consequences of such reasoning will often produce the greatest injustice. * * * *No man can be imprisoned for mere inability to pay his contract debts, nor for failing to pay over to a receiver money which he does not have. Nor should there be involved in the modern administration of jurisprudence any considerable peril of such consequences.*’

This case is on all fours with the case at bar, and lays down the only safe rule in such cases.”
(Italics ours.)

And at pages 140 and 141:

“The failure of the bankrupt to pay through inability lacks the essential element of contempt. Inability to comply with the command of the court is always a complete defense to a charge of contempt. It cannot be imputed to any one that he is guilty of a contempt of court for neglecting or refusing to do what it appears is out of his power to do. An order of commitment in such case is void.”

“No man can be imprisoned for a constructive contempt on suspicion or conjectures, or upon inferences which may or may not be well founded. For this reason from the earliest times the doctrine has obtained that *when one accused of a constructive contempt in a court of law denies positively and specifically the alleged contempt, under oath, the proceeding against him for contempt must be dismissed.* In *Rex v. Sims*, 12 Mod. 511—one of the earliest cases to be found in the books on the subject—this is the opinion:

‘Per Curiam. If one brought in, in contempt, deny all upon oath, he is, of course, discharged of the contempt; but, if he has forsworn himself, he may be prosecuted for perjury.’

Mr. Blackstone says:

‘If the party can clear himself upon oath, he is discharged, but, if perjured, may be prosecuted for the perjury.’ 4 Bl. Comm. 288.

The doctrine thus laid down is still the rule followed by courts of common law; those courts uniformly holding that, if one accused of a constructive contempt fully answers all the charges on his oath, he must be discharged: *the answer must, for the purposes of the contempt proceed-*

ings, be taken as true, and extrinsic evidence cannot be received to impeach it. And this is the doctrine in the federal courts." (Italics ours.)

VI.

DECREES ARE IN EFFECT IMPRISONMENT FOR DEBT.

Because of the inability of defendant to comply with the turn over order the decrees of the lower court herein constitute imprisonment for debt, and are therefore void as in conflict with the Constitution of the United States.

In *Boyd v. Glücklich* (supra), at page 136, the court say:

“A court of bankruptcy cannot sentence a bankrupt to imprisonment for debt, any more than any other court of the United States can do that thing; and what it cannot do directly it cannot do by indirection, under another name. It cannot, therefore, lawfully order a bankrupt to deliver to the trustee money or property he has not got in his possession or under his control, and imprison him if he does not comply with the order. Plainly, that would be imprisonment for debt, and the order is not relieved of that illegal and odious quality by calling it ‘imprisonment for contempt.’ The court that makes such an order is in contempt of the law and constitution, and not the bankrupt in contempt of the court.”

Ex parte Jansten, 154 Cal. 540, 545; Held: An order in a contempt proceeding directing party to be imprisoned until he has complied therewith is void unless

party is able to make such payment, since there is no imprisonment for debt in the United States.

In conclusion this counsel for appellant asks the indulgence of the court to say, or to admit, that the position in which appellant finds herself today is largely due to the inexperience of counsel in court practice. I represented appellant in the long drawn out proceedings before the master, as a matter of friendship and without compensation, because appellant had no money to employ other counsel. I absolutely know of the right and justice of appellant's cause, and I shall continue, with every resource at my command, to fight for that cause to the end that justice shall be done and appellant vindicated.

Wherefore appellant asks for a judgment of this court reversing the judgment and decrees of the District Court finding appellant guilty of contempt and committing her to jail, and that appellant be discharged from custody; and for appellant's costs herein.

Dated, San Francisco,
April 9, 1934.

Respectfully submitted,

CLARENCE G. ATWOOD,

Attorney for Appellant.



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Appellee.

APPELLANT'S PETITION FOR A REHEARING.

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APPELLANT'S PETITION FOR A REHEARING.

*To the Honorable Curtis D. Wilbur, Presiding Judge,
and to the Associate Judges of the United States
Circuit Court of Appeals for the Ninth Circuit:*

Appellant above named respectfully petitions that the decision of this court herein (rendered on August 29, 1934) be set aside and a rehearing of the cause be granted on each and all of the following grounds, to-wit:

(a) The opinion of this court herein lays down an erroneous rule as to the necessity of taking exceptions to a final adjudication in con-

tempt proceedings, before such adjudication can be reviewed on appeal.

(b) The opinion of this court has failed to pass upon the necessity of a finding that appellant had the present ability to comply with the turn-over order.

(c) The opinion of this court fails to pass upon the necessity that the affidavit—on which the order to show cause was predicated—contain an allegation as to the then present ability of appellant to comply with the turn-over order.

(d) The opinion of this court has confused the question of what evidence is sufficient for the court to find appellant's ability to comply with the turn-over order and the question of whether or not the adjudication of contempt must contain a finding as to such ability.

(e) The opinion of this court has ignored the presumption of innocence, with which appellant was always clothed, and allowed a presumption in conflict therewith to take its place.

(f) On the foregoing points the decision of this court herein is in direct conflict with the opinions and decisions of the Supreme Court of the United States and of other Circuit Courts of Appeals.

1. THE ORDER OF THE DISTRICT COURT, ADJUDGING APPELLANT GUILTY OF CONTEMPT, IS REVIEWABLE ON APPEAL WITHOUT ANY OBJECTION HAVING BEEN MADE OR EXCEPTION TAKEN TO THE SAME.

It is fundamental that an exception need not be taken to a final order in order to secure a review of the same on appeal.

Chicago etc. Ry. Co. v. Barnett, 190 Fed. 118;
Maxell v. Ricks, 294 Fed. 255.

That orders adjudicating one to be guilty of contempt and orders of commitment based thereon are final orders, reviewable as other final orders, has been repeatedly held by our appellate courts. In this behalf see:

Bessette v. Conkey Co., 194 U. S. 324, 337-338,
 48 L. Ed. 997, 1005-1006;

Alexander v. U. S., 201 U. S. 117, 121, 50 L. Ed.
 686, 688;

Shuler v. Raton Water Works Co., 247 Fed.
 634;

Maxwell v. Ricks, 294 Fed. 255.

From the foregoing it follows that the court was in error in holding that an objection had to be made and an exception taken to the final order of the District Court adjudging appellant guilty of contempt and committing her therefor.

-
2. THE AFFIDAVIT ON WHICH THE CONTEMPT PROCEEDINGS WERE PREDICATED WAS INSUFFICIENT TO CONFER JURISDICTION ON THE DISTRICT COURT.

Before a court can punish one for constructive contempt the matter must be brought to the attention

of the court by an appropriate pleading. The presence of such a pleading is jurisdictional and it must contain a statement of facts which shows the commission of a contempt and must contain a prayer asking for the infliction of a punishment. Whether the contempt sought to be punished be termed a civil or criminal contempt, the necessity of such a pleading remains the same.

“The charging paper, whether it be a petition, motion, or affidavit, of which the complaining party avails himself to invoke the court’s action, must not be defective in substance but must show on its face facts sufficient to constitute a contempt and to justify the relief sought and must also have an appropriate prayer. 9 Cyc. 38; Gompers Case. If it fails in either of these respects, the accused may avail himself of such defect, even if he did not prior to the hearing of his cause object by motion, demurrer, or answer.”

Phillips Sheet etc. Co. v. Amalgamated etc. Workers, 208 Fed. 335, 344.

“Since a person accused of contempt committed out of the presence of the court or judge is entitled to be informed of the nature and cause of the accusation against him, the initiatory information or affidavit is jurisdictional.”

13 *Corpus Juris.*, p. 64, sec. 89.

“Whether the proceedings be civil or criminal, there must be an allegation that in contempt of court the defendant has disobeyed the order and a prayer that he be attached and punished therefor.”

Gompers v. Buck’s Stove Co., 221 U. S. 418, 441, 55 L. Ed. 797, 806.

“We have already shown that in both classes of cases there must be allegation and proof that the defendant was guilty of contempt, and a prayer that he be punished.”

Gompers v. Buck's Stove Co., 221 U. S. 418, 448, 55 L. Ed. 797, 808.

“A contempt proceeding is sui generis (*Besette v. Conkey Co.*), and the Supreme Court has specified the form, or at least the essential substance of the form, of prayer for this particular kind of a proceeding, whether punishment or remedial relief, or both, be sought, and has ruled that punishment cannot be inflicted unless there is a prayer for it. See, also, *Re Kahn*, 204 Fed. 581 (C. C. A. 2); *Anargyros v. Anargyros* (C. C.) 191 Fed. 208.”

Phillips etc. Co. v. Amalgamated etc. Workers, 208 Fed. 335, 345.

In view of the language of our Supreme Court in the *Gompers* case, supra, and the other authorities above cited an inspection of the affidavit filed in this case shows that it was insufficient to justify the court in inflicting any punishment either for the purpose of coercing action on the part of appellant or of punishing her for failure to obey the order of the court. The affidavit will be found on pages 5 and 6 of the transcript and concludes with the following prayer:

“Wherefore, plaintiff prays that an order to show cause be issued by this Court directing the defendant to appear before said Court upon a day certain to show cause why she should not be adjudged guilty of contempt for her failure and

refusal to observe and perform the commands of said order directing her to pay over to the Clerk hereof said trust funds.”

There is nothing in the affidavit praying or asking that any punishment be inflicted on appellant. The absence of such prayer is fatal to the validity of the order based thereon.

The affidavit is likewise defective in not containing any allegation as to the present ability of appellant to comply with the turn-over order. The absence of such allegation has been held, by the Circuit Court of Appeals, to be a fatal defect.

“It contains no allegation that her failure to pay was wilfull, nor anything to show that it was not caused by mere inability. Applying strict rules, this, of course, would not be sufficient to put her on the defensive.”

In re Cole, 163 Fed. 180, 186.

The affidavit does not meet the requirement set forth in the *Cole* case or in the *Phillips* case. (Both quoted supra.) The District Court was therefore without jurisdiction to proceed in the matter or to render any determination which carried with it the infliction of any punishment or imprisonment of appellant. For these reasons alone the order should be reversed.

3. **THE ORDER OF COMMITMENT IS VOID FOR WANT OF A FINDING THAT APPELLANT HAD THE PRESENT ABILITY TO COMPLY WITH THE TURN-OVER ORDER.**

This identical point was raised on the appeal and is noted in the decision of this court but the opinion fails to pass upon this question.

It is true this court discusses the right of the trial court to find such present ability upon a presumption arising from the recital in the turn-over order; but the question of what is sufficient evidence to justify such a finding is entirely different than the question of the necessity of making such a finding.

Assuming, merely for the purposes of argument, that in a proceeding of this kind the court can treat the presumption of continuing ability as predominating over the presumption of innocence, it nevertheless remains incumbent on the court to make a finding to the effect that the presumption of innocence has been overcome, *i. e.*, there must be a finding of the present ability to comply with the order. The absence of such a finding is fatal to any adjudication of contempt or order of commitment based thereon.

It should require no citation of authority to support the proposition that a naked failure to obey an order of court does not constitute contempt and, in addition to such failure, there must be a present ability to comply with such order. If one, through no wilful act, has not the physical ability to comply with the order no contempt has been committed. An inspection of the order of commitment in this case (Tr. pp. 10 to 14) shows that the only finding

of fact made by the court on this point is that appellant "has wilfully disobeyed said order of this court and has wilfully failed and refused to pay over to the Clerk said sums of money, said trust funds, as aforesaid, found to be in her hands by said special master, or any part thereof". (Tr. p. 13.) Thus, all the court found was that at the time of the report of the special master the funds were in the hands of appellant and that at the time of the hearing appellant had not paid any of said funds over. There is nothing in the order which finds that at the time appellant was adjudged guilty of contempt that she then had the present ability to comply therewith. In fact, the order of commitment shows that the entire matter was determined by the court on the affidavit of appellee (which also fails to allege appellant's present ability), the order to show cause and proof that the same had been served upon appellant. The record affirmatively discloses that no testimony was taken by the court.

The rule requiring findings on all material issues to be necessary for the support and adjudication of contempt is correctly set forth in Ruling Case Law as follows:

"a court has no right to adjudge a party to be in contempt of court without making findings of fact showing as a matter of law that the party accused is in fact guilty of contempt, or that by reference to the petition and the adoption of the facts there stated, the decree may serve the purpose of findings. * * * The only object of requiring these facts to be shown somewhere in the

record is to enable the reviewing court to see whether they amount to a contempt, and thus to determine from them the jurisdiction of the trial court. And if the procedure prescribed requires an affidavit first to be presented to the trial court containing these facts as a foundation of the proceeding, the court of review can, and does, look to the statement in the affidavit for the purpose of ascertaining whether the court below had jurisdiction, and it is not necessary to repeat the statement in the judgment. * * * *The judgment must show affirmatively the defendant's ability to comply with the order of the court.*" (Italics ours.)

6 R. C. L. pp. 536-7.

In *Terminal Railroad Assoc. v. U. S.*, 266 U. S. 17, 69 L. Ed. 150, the necessity of findings on all facts necessary to constitute a contempt is stated by the Supreme Court, supported by an abundance of authorities, as follows:

"In contempt proceedings * * * the facts found must constitute a plain violation of the decree so read."

In each of the cases cited by this court in its decision full findings were prepared by the trial court and the decisions were rendered upon the facts as found. In the present case there is no finding to the effect that appellant had the present ability to comply with the turn-over order.

The fact that the trial court may have been justified in finding that appellant had the ability to comply with the order does not take the place of such a finding. This court has failed to pass upon the question

of the necessity of such a finding by the trial court. For this reason alone a rehearing of this matter should be granted.

4. **THE PRESUMPTION OF INNOCENCE MUST PREVAIL OVER ANY DISPUTABLE PRESUMPTION TO THE CONTRARY.**

This court has justified the action of the lower court by invoking a rule to the effect that the presumption of continuing ability of appellant to comply with the turn-over order prevails until it is shown to be otherwise. In adopting this line of reasoning the court has completely ignored the nature of a proceeding of this character and the presumption of innocence that at all times protected appellant.

A proceeding of this character must be treated as a proceeding criminal in its nature, irrespective of whether the proceeding is one to coerce compliance with a decree or to punish for a disobedience of the decree (see *Bessette v. Conkey Co.*, 194 U. S. 324, 48 L. Ed. 997) and the accused is entitled to the benefits of the presumption of innocence.

“While the ‘contempt proceeding is sui generis,’ it is distinctly criminal in its nature (*Bessette v. W. B. Conkey Co.*, supra), and the accused is clearly entitled to the benefits of the common-law presumption of innocence, with its strict requirement of proof for conviction, although the pleadings may not be subject to the technical rules of the criminal law.”

Garrigan v. United States, 163 Fed. 16, 23
L. R. A. (N. S.) 1295 at 1300.

In the last cited case Garrigan was adjudged guilty of contempt and the findings set forth that he had full knowledge of the order which he is alleged to have violated. The Circuit Court of Appeals points out there was no evidence to support this finding and that on such issue *the presumption of innocence had to prevail*. The language of the court in this regard is as follows:

“He is clearly entitled to the benefit of ‘the presumption of innocence, as evidence in favor of the accused, introduced by the law in his behalf’ (Coffin v. United States, 156 U. S. 432, 458, 460, 39 L. ed. 481, 492, 493, 15 Sup. Ct. Rep. 394, reaffirmed in the recent opinion of this court in Dalton v. United States, 83 C. C. A. 317, 154 Fed. 461), which arises alike in respect of notice and conduct, as ‘an instrument of proof created in his favor;’ and the mere inference of ‘full knowledge,’ derived solely from the above-mentioned facts, is without force, as we believe, to overcome the express denial of knowledge on the part of the accused, fortified by the presumption thus defined. The finding of such knowledge, therefore, is unsupported by the needful proof to authorize conviction, and cannot be upheld under the foregoing view.”

See also,

Jones v. United States, 209 Fed. 585, 587.

In *Stewart v. Reynolds*, 204 Fed. 709 at 715, the Circuit Court of Appeals points out that all presumptions which apply to the trial of a criminal action must be applied in a contempt proceeding.

“In contempt cases, and especially in those which involve the charge of another criminal offense besides the contempt, the rules of evidence applicable to civil cases in reference to presumptions and the shifting of the burden of proof do not apply; but the proceedings and ‘the rules of evidence and presumptions of law applied in criminal cases should be observed.’ Bates’ Case, *supra*; State v. Matthews, 37 N. H. 450, 454; United States v. Wayne, Wall. Sr., 134, Fed. Cas. 16,654; United States v. Jose (C. C.) 63 Fed. 951; In re Switzer (D. C.) 140 Fed. 976.”

The presumption of innocence can only be overcome by *evidence of facts* to the contrary and where a conflict occurs between the presumption of innocence and any other disputable presumption which leads to the conclusion of guilt, *the presumption of innocence must prevail*.

In *People v. Douglas*, 100 Cal. 1, 34 Pac. 490, the court refused to give an instruction to the effect that where there are two presumptions, one in favor of innocence and the other in favor of a criminal course of conduct, the one in favor of innocence must prevail. The Supreme Court upheld the refusal of the giving of such an instruction upon the ground “there cannot be two presumptions in a criminal case. The accused is presumed to be innocent until his guilt can be established beyond a reasonable doubt”.

In *People v. Scott*, 22 Cal. App. 54, 133 Pac. 496, the defendant was accused of the crime of selling land twice and in order to render defendant guilty it was

necessary to prove an effectual first sale. This involved proof of a delivery of a deed in consummation of the first sale. The evidence showed such deed to be in the hands of a third person, but there was no evidence to the effect that defendant had delivered or authorized the delivery of the deed to such person. The court held that this essential fact could not be supplied by way of presumption of delivery following from the fact of possession and in doing so said:

“This cannot be indulged in opposition to the presumption of innocence.”

In *People v. Strassman*, 112 Cal. 683, defendant was prosecuted for perjury in testifying to his ownership of certain property. The prosecution proved that at some previous time the property stood of record in the name of another and attempted to rely on the presumption of continuance of ownership in such third person. The court held that such presumption could not be invoked against the presumption of innocence and in doing so said:

“But all such disputable presumptions give way before the presumption of innocence which belongs of right to every defendant, and which remains with him until the prosecution by convincing proof has established his guilt.”

In the case at bar the appellant was clothed with the presumption of innocence and before she could be guilty of contempt in disobeying the court's order it was necessary that it be established that she had the ability to comply therewith. No presumption as to

such ability can be indulged in opposition to the presumption of innocence. The mere fact that the master found that at some previous time she had such ability did not give rise to a finding that such ability continued any more than proof that the property involved in the *Strassman* case, supra, had at one time been in the name of a third person justified the presumption that it continued to remain in the name of such person.

It was at all times incumbent on the parties complaining of appellant's violation of the order to prove that she had the ability to comply therewith. This required *proof of facts to overcome the presumption of innocence* and the burden could not be sustained by relying on a presumption in conflict with the presumption of innocence.

It follows that even though the court had found (which it did not do) that appellant had the ability to comply with the order such finding would have been erroneous, as the record discloses that no evidence as to her present ability was ever introduced and such finding would have been based solely on a presumption in direct conflict with the presumption of innocence. As was said in *In re Cole*, 163 Fed. 180, 188:

“* * * but when it comes to the proposition that, at any specific date or time to which the proceedings might refer, Mrs. Cole had so completely under her control funds which she could command that her failure to command them was a willful contempt of the court, or when it comes to the

issue that funds might not have been squandered, or even wrongfully disposed of by sending them to her husband's brother, or in some other way, *there is such failure of proof that even the determination of the District Court cannot supply it.*" (Italics ours.)

The same rule is expressed in *Boyd v. Glucklich*, 116 Fed. 131, 140:

"The ability of a bankrupt to comply with the order of the court must be made to appear, before he can be punished for contempt. And it must be made to appear by evidence which leaves no reasonable doubt in the mind of the court on that subject. Evidence which is merely persuasive will not suffice. He cannot be imprisoned for the purpose of exploitation." (Italics ours.)

Wherefore, appellant respectfully submits that a rehearing of the above cause be granted in order that the foregoing errors may be corrected by this court and justice done to appellant in the premises.

Dated, San Francisco,

October 5, 1934.

Respectfully submitted,

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and Petitioner.*

CERTIFICATE OF COUNSEL.

I hereby certify that I am of counsel for appellant and petitioner in the above entitled cause and that in my judgment the foregoing petition for a rehearing is well founded in point of law as well as in fact and that said petition for a rehearing is not interposed for delay.

Dated, San Francisco,
October 5, 1934.

LEO R. FRIEDMAN,
*Of Counsel for Appellant
and Petitioner.*

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